

Final Environmental Assessment

Hanscom Air Force Base

Massachusetts

Renovate Fourth Cliff Recreational Annex



U.S. AIR FORCE

Prepared by:



HANSCOM AFB 66 ABG/CEIE
72 DOW STREET
HANSCOM AFB, MA 01731

November 2014

Report Documentation Page			Form Approved OMB No. 0704-0188		
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE 17 NOV 2014		2. REPORT TYPE Environmental Assessment		3. DATES COVERED 00-00-2011 to 00-00-2014	
4. TITLE AND SUBTITLE Final Environmental Assessment to Renovate Fourth Cliff Recreational Area at Hanscom Air Force Base, Massachusetts			5a. CONTRACT NUMBER		
			5b. GRANT NUMBER		
			5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S)			5d. PROJECT NUMBER		
			5e. TASK NUMBER		
			5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) United States Air Force,Hanscom Air Force Base,Bedford,MA,01730			8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSOR/MONITOR'S ACRONYM(S)		
			11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT Final Environmental Assessment to Renovate Fourth Cliff Recreational Area at Hanscom Air Force Base, Massachusetts					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 121	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

**FINDING OF NO SIGNIFICANT IMPACT
HANSCOM AIR FORCE BASE
RENOVATE FOURTH CLIFF RECREATIONAL ANNEX
SCITUATE, MASSACHUSETTS**

Pursuant to the Council on Environmental Quality regulation for implementing the procedural provisions of the National Environmental Policy Act (NEPA), Title 40 of the Code of Federal Regulations (CFR) §§ 1500–1508; Air Force Environmental Impact Analysis Process (EIAP) regulations 32 CFR § 989 and Department of Defense Directive 6050.1, the Air Force has prepared an Environmental Assessment (EA) to identify and assess the potential impacts on the natural and human environment associated with renovating the Hanscom Air Force Base (AFB) Fourth Cliff Recreational Annex in Scituate, MA.

Background (EA § 1.1, pages: 1-1 to 1-3): The Fourth Cliff Recreation Annex (Fourth Cliff) located in Scituate, MA is owned, operated, and maintained by the United States Air Force for the purpose of providing passive and active recreational activities to military members, Department of Defense civilian employees, eligible contractors, and their families.

Purpose of and Need for the Proposed Action (EA § 1.2, page: 1-4): The purpose of the proposed action is to modify and upgrade the existing Fourth Cliff Recreation Annex and associated facilities to meet the current needs and demands of its users; all active and retired military, eligible DoD civilians, and authorized contractors. Currently, access to the existing Recreational Vehicle (RV) sites is limited due to erosion of the adjacent cliff. Building 35 and Building 37 are in major disrepair and pose increasing maintenance and operating costs. Demolishing Building 35 and Building 37 and constructing eight (8) new RV sites at the location of the demolished buildings would eliminate costs to maintain and operate the cabins, and better meet the needs and demands of its users. If the current situation continued at the Hanscom AFB Fourth Cliff Recreation Annex, then use of the site will continue to be impaired. The cabins would continue to deteriorate due to insufficient resources needed to sustain them and the continuous coastal erosion will result in the current RV sites becoming non-accessible. Safety concerns related to deteriorating facilities and infrastructure will increase. Costs related to maintain the cabins, utilities and housekeeping would continue.

Description of Proposed Action (EA § 2.1, pages: 2-1 and 2-2): Hanscom AFB proposes to modify and upgrade the existing Fourth Cliff Recreation Annex and associated facilities to meet the current needs and demand of its users. The proposed action is to demolish two (2) cabins, Building 35 and Building 37, and construct eight (8) RV sites at the Fourth Cliff Recreation Annex. Currently, the cabins are rapidly deteriorating, and access to existing RV sites does not meet user demand. The proposed action to Renovate Fourth Cliff Recreational Annex includes the following two phases: 1) Demolition of Building 35 and Building 37 and 2) Construction of eight (8) new RV sites.

Description of No-Action Alternative (EA § 2.2.1, page: 2-3): The no-action alternative maintains the status quo. Under the no-action alternative, the Fourth Cliff Recreational Annex would remain in its current condition and there would be no modifications to the site. The no-action alternative does not meet the needs of the proposed action because the current situation will continue at the Hanscom AFB Fourth Cliff Recreational Annex, and the facility will retain its current limitations such as limited access to RV users and safety concerns. Maintenance and operational costs will increase for Building 35 and Building 37 if the cabins were to remain.

Description of Alternatives Eliminated from Detailed Analysis (EA § 2.3 and 2.4, pages: 2-3 to 2-4): The following standards were used to determine reasonable alternatives: 1) Environmental Impact and

2) Meets Purpose and Need of Proposed Action. Resources have not been committed prejudicing the consideration of reasonable alternatives. Two other alternatives, the Maintain Building 35 & Building 37/Construct 4 RV Sites Alternative and the Restore Building 35 & Building 37 Alternative were evaluated but eliminated from further analysis.

Maintaining the existing cabins would result in more maintenance and operating costs than if the cabins were converted to RV sites. Maintaining the cabins would not meet the needs of potential RV users especially if the existing RV sites are lost due to erosion. The additional four (4) RV sites would be on already disturbed land so the environmental impact would not be significant but there would be an increase in impervious surface. This alternative does not meet purpose and need of the proposed action and is eliminated from further analysis. Restoring the existing cabins would require costly demolition and construction expenses, and result in more maintenance and operating costs than if the cabins were converted to RV sites. Restoring the cabins would not meet the needs of potential RV users especially if the existing RV sites are lost due to erosion. The environmental impact would not be significant, however this alternative does not meet purpose and need of the proposed action and is eliminated from further analysis.

Summary of Environmental Consequences (EA § 4, pages: 4-1 to 4-23): The EA prepared to Renovate the Hanscom AFB Fourth Cliff Recreational Annex addresses the site-specific impacts of demolishing two (2) existing cabins and constructing eight (8) RV sites, and evaluates the consequences of the proposed action and alternatives on the natural and man-made environments.

If the proposed action was to occur, no significant impact associated with land use, socioeconomics, occupational safety & health, water supply, wastewater, solid waste, transportation, noise, air quality, geology/soils, surface water/groundwater, floodplains, biological resources, cultural resources, hazardous waste, or the environmental restoration program would be anticipated. Minor impacts, however, may occur in the short-term. The construction and site restoration activities have potential to affect adjacent land uses due to elevated noise levels, increased dust, minor interferences with roadway access, and visual effects. The renovation of the Fourth Cliff Recreational Annex would create construction and demolition debris, and may cause minor soil and groundwater disturbance. Smaller trees and shrubs may be cleared incidental to other construction activities. The short-term loss of some vegetation is not anticipated to substantially impact the biological community on, or in the vicinity of, the proposed action's site.

The coastal dunes on the western side of Fourth Cliff also provide habitat for the state-threatened and federally endangered piping plover (*Charadrius melodus*) and the state-listed species of special concern least tern (*Sternula antillarum*). The proposed project is not near the habitats of the piping plover or least tern, and Hanscom AFB has obtained concurrence with United States Fish and Wildlife Service (USFWS) and the Massachusetts National Heritage & Endangered Species Program that the project would not impact threatened or endangered species. (EA § 4.11.4.2, pages: 4-15 and 4-16).

Hanscom AFB sent a letter to the Massachusetts's Historical Commission (MHC) on 8 July 2014. MHC concurred on 5 August 2014 that the proposed action does not have an adverse effect on significant historical or archeological assets of the Commonwealth. A similar letter was sent to the Situate Conservation Commission on 8 July 2014. No response was received after 30 days from the receipt of the letter indicating concurrence with Hanscom AFB's determination. Consultation with the State Historic Preservation Officer (SHPO) and the Situate Conservation Commission has been completed. (EA § 4.12.2, page: 4-16). There are historically protected buildings near the site and workers should be made aware of the protected buildings and avoid disturbance.

On 1 July 2014, the Hanscom AFB Environmental Section sent a letter to the Massachusetts Commission of Indian Affairs, the Wampanoag Tribe of Gay Head (Aquinnah) and the Mashpee Wampanoag Tribe (MWT) to inform them of the proposed action. No response from the Wampanoag Tribe of Gay Head (Aquinnah) and the Massachusetts Commission of Indian Affairs after 30 days from the receipt of the letter indicated concurrence with the proposed action. The Tribal Historical Preservation Department of the MWT responded in a letter dated 4 August 2014, indicating that the project has the potential to have “adverse effects” to historic or cultural resources important to the tribe and requested additional information in order to review the project property. On 18 August 2014, the Hanscom AFB Environmental Section spoke with the MWT and provided additional information for their review. Past archeological surveys and previous disturbance of the site indicated that it is highly unlikely that archeological artifacts would be discovered if the preferred alternative was implemented. A 1993 archeological survey of the site was sent to the MWT for their review. A letter dated 5 September 2014 from MWT to Hanscom AFB indicates that Hanscom AFB has completed the MWT section 106 review process but if artifacts are discovered during the work then work must cease and the MWT must be contacted. If any artifacts, burial remains or funerary objects are discovered at any time during the proposed action, the Air Force or its contractor will immediately cease activity and contact the Massachusetts Commission of Indian Affairs, the Wampanoag Tribe of Gay Head (Aquinnah) and the Mashpee Wampanoag Tribe in regards to the disposition of any such artifact, remains, or objects. (EA § 4.12.2, pages: 4-16 and 4-17).

A recent facility survey of the buildings found Asbestos Containing Building Materials (ACBM) in the sink basin undercoating and roof flashing materials. Proper abatement of the materials will be required in accordance with applicable State and Federal regulations. In addition, paint containing trace concentrations of lead was found in each building. As lead was found to be present in the screening, proper waste testing must be completed prior to disposal of any waste. No PCB or assumed PCB ballasts were observed within either of the buildings. During removal of the lights, additional inspections should be performed for the presence of any light fixtures that may contain either PCB containing ballasts or mercury containing fluorescent light bulbs. PCB and non-PCB ballasts should be segregated and packaged for waste disposal in accordance with State and Federal requirements. One mercury switch/thermostat was observed in Building 35 and no suspected mercury switches/thermostats were observed in Building 37. Abatement of asbestos, removal of lead containing materials, and disposal of regulated wastes must be in accordance with OSHA, Massachusetts and Federal requirements. (EA § 4.13.2, pages: 4-18 and 4-19).

While some environmental impacts would result from this project, they are expected to be minor. The anticipated short-term construction impacts are not atypical compared with other routine construction projects. Additionally, Hanscom AFB has undertaken, or will employ, a number of pro-active measures to reduce the project’s potential impact to the environment. Any impacts are anticipated to be insignificant and can be minimized further by using the best management practices described below and in the Renovate the Hanscom Fourth Cliff Recreational Annex EA.

The proposed action can have a positive and cohesive impact on the Hanscom AFB Fourth Cliff community. Once the Fourth Cliff Recreational Annex is fully renovated, the area will meet the current needs for active and retired military, eligible DoD civilians, NAF employees, and authorized contractors. The action would also result in less operating costs and safety concerns related to maintaining the aging cabins. The renovation of Fourth Cliff would result in a positive impact on Hanscom AFB’s services program. It would also create short-term business in the local construction industry. Another benefit is that as construction employees utilize local businesses, more revenue is generated in the short term. The proposed action would also result in a decrease in impervious surface resulting in a net decrease in runoff

and an increase in detention and/or groundwater recharge. This would result in a positive impact to stormwater runoff and groundwater at the Fourth Cliff Recreational Annex.

Cumulative Impacts (EA § 4.14, pages: 4-20 to 4-23): The cumulative impacts of implementing the Proposed Action along with other known past, present, and future projects were assessed in the EA. Hanscom AFB is currently pursuing a Fourth Cliff Shoreline Stabilization Project that has four primary goals: 1) Increase safety for personnel and patrons at the site; 2) Provide protection of the exposed cliff face from rainwater runoff; 3) Provide shoreline protection for the 100-year storm event; and 4) Minimize ongoing maintenance costs.

The cumulative impact of this action when compared with the preferred alternative would be positive long-term impacts to safety and cultural resources and the Fourth Cliff Recreational Annex. The enhanced protection of the cliff would increase the safety for employees and patrons at the site. The enforced cliff would also secure historic structures and eliminate the threat of damage or loss of cultural resources due to extreme rain water run-off and coastal storm events. In the short-term for both projects, air quality would be degraded temporarily during construction due to emissions from heavy equipment, increased vehicle traffic during delivery of equipment and materials, and dust associated with earth-moving activities. Enforcement of common construction practices during the construction period would minimize impacts on air quality. Policies regarding truck trips, idling, and size and type of earth moving equipment would be established to minimize the temporary degradation of air quality. In addition, construction vehicle operation and the movement of materials would generate noise at the construction site and along traffic corridors to Fourth Cliff. However, these impacts would be short in duration and would not be expected to cause undue annoyance.

Measures to Reduce Potential for Impact (EA § 5, pages: 5-1 to 5-2): It is anticipated that the following best management practices (BMPs) would be used during the Renovation of the Fourth Cliff Recreational Annex. A phased construction schedule would be implemented to reduce peak traffic/noise levels and thus minimize disruption to nearby land uses. Transportation of heavy trucks would only be allowed during normal business hours to avoid the disturbance of surrounding residential areas. The contractor would submit traffic control plan including the approximate duration of the project and affected roads prior to receiving a notice to proceed from Hanscom AFB. Mufflers would be used on construction equipment and vehicles to minimize noise impact. A site specific safety plan (SSSP) would be developed by the contractor and approved by the government prior to the start of work to ensure occupational safety and health compliance. Existing utility alignments will be identified through markings (similar to “Dig Safe”) prior to any excavation to prevent damage to existing infrastructure. Hanscom AFB dig permitting procedures must be followed. Drainage design must meet Massachusetts Stormwater Management Standards, as well as comply with the Federal Clean Water Act.

Solid waste management would be in compliance with Hanscom AFB recycling policies to minimize the amount of solid waste disposed without beneficial reuse during demolition, construction, and operation of the renovated Fourth Cliff Recreational Annex. All hazardous materials used during construction would be handled and disposed of in accordance with Hanscom AFB policies and protocols and all applicable state and federal regulations, and processed through the Hanscom AFB HAZMART Pharmacy. All equipment and vehicles used during the proposed action would be maintained in good operating condition so exhaust emissions are minimized, thus reducing the potential for air quality impacts.

Dust would be controlled onsite by using water to wet down disturbed areas. Sedimentation controls would be installed to minimize offsite runoff that may contain suspended solids. Disturbed areas will be seeded and stabilized as soon as possible to reduce erosion of disturbed soil with controls left in place until vegetation is established. Mature trees will have protective barriers placed around them to minimize

the potential for damage. Most of the landscape plants/trees will remain in-place, and damage to plants would be minimized. The contractor will be made aware of any restricted areas related to the piping plover and least tern. Hanscom AFB currently informs patrons of the protected birds and restricted areas through educational displays, proper signage, and restricted access to habitat areas. The proposed action is not near the restricted areas, or within a wetland or coastal zone buffer zone. No reply from the Office of Coastal Zone Management indicates concurrence with Hanscom AFB's determination that the project does not impact a coastal area.

If any artifacts, burial remains or funerary objects are discovered at any time during the proposed action, the Air Force will immediately cease activity and contact the Massachusetts Commission of Indian Affairs, the Wampanoag Tribe of Gay Head (Aquinnah) and the Mashpee Wampanoag Tribe in regards to the disposition of any such artifact, remains, or objects.

All hazardous materials used or encountered during construction, demolition, or operation will be handled and disposed in accordance with Hanscom AFB policies and protocols and all applicable state and federal regulations. The disposal of any hazardous/state regulated wastes generated will be coordinated with the Hanscom AFB Environmental Section. Any asbestos abatement will also be coordinated with the Hanscom AFB Environmental Section. Asbestos abatement will only be done by a licensed asbestos contractor. Additionally, full containment and a licensed project monitor may be required. The asbestos contractor must comply with all state and federal regulations.

The installation analyzed impacts from energy usage and alternative energy sources. All new construction, major renovation, or repair and alteration of Federal Buildings will comply with the *Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings*.

Required Permits (EA § 1.4, page: 1-5):

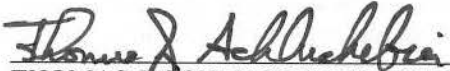
- (NPDES) General Permit for Stormwater Discharges from Construction Activities (only if work is greater than 1 acre)
- MassDEP BWP AQ 06 – Notification Prior to Construction or Demolition
- Mass DEP Asbestos Notification ANF-001
- Hanscom Digging Permit

Consultation and Public Involvement (EA § 1.5, page: 1-7 and EA § 6, pages: 6-1 to 6-42): Hanscom AFB consulted with the Town of Scituate, Massachusetts Historical Commission, Massachusetts Office of Coastal Zone Management (CZM) South Shore Regional Office, Scituate Historical Commission, U.S. Fish and Wildlife Service, Massachusetts National Heritage and Endangered Species Program, North and South River Watershed Association, Massachusetts Commission of Indian Affairs, the Wampanoag Tribe of Gay Head (Aquinnah), and the Mashpee Wampanoag Tribe.

Copies of the Draft Renovate the Hanscom AFB Fourth Cliff Recreational Annex EA and FONSI were made available for public review beginning on 9 October 2014 at the main public library in Scituate, MA and at the Hanscom AFB Environmental Office, Building 1825. No comments were received.

Finding of No Significant Impact

Based on the detailed description of effects described in the Renovate the Hanscom AFB Fourth Cliff Recreational Annex Environmental Assessment for this proposed action, I have determined that the proposed action to renovate the Fourth Cliff Recreational Annex would not have a significant impact on the natural or human environment; therefore, an environmental impact statement is not required. This analysis fulfills the requirements of NEPA, the President's Council on Environmental Quality 40 C.F.R. §§ 1500-1508 and the Air Force EIAP regulations 32 C.F.R. § 989.



THOMAS J. SCHLUCKEBIER, P.E., CFM, LEED AP
Base Civil Engineer

11 / 17 / 14
Date

Table of Contents

SECTION 1.	PURPOSE OF AND NEED FOR THE PROPOSED ACTION	1-1
1.1.	BACKGROUND	1-1
1.2.	PURPOSE OF AND NEED FOR THE PROPOSED ACTION	1-4
1.3.	APPLICABLE FEDERAL LAWS AND REGULATIONS	1-5
1.4.	REQUIRED FEDERAL, STATE, AND LOCAL PERMITS	1-6
1.5.	AGENCIES AND PERSONS CONSULTED	1-7
SECTION 2.	DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES	2-1
2.1.	PROPOSED ACTION – RENOVATE FOURTH CLIFF RECREATIONAL ANNEX	2-1
2.2.	ALTERNATIVES	2-2
2.3.	SELECTION STANDARDS	2-3
2.4.	ALTERNATIVES ELIMINATED FROM DETAILED ANALYSIS	2-3
SECTION 3.	AFFECTED ENVIRONMENT	3-1
3.1.	LAND USE	3-1
3.2.	SOCIOECONOMIC CONDITIONS	3-2
3.3.	OCCUPATIONAL SAFETY AND HEALTH	3-3
3.4.	UTILITIES	3-5
3.5.	TRANSPORTATION	3-8
3.6.	NOISE	3-9
3.7.	AIR QUALITY	3-9
3.8.	GEOLOGY AND SOILS	3-11
3.9.	SURFACE WATER AND GROUNDWATER	3-12
3.10.	FLOODPLAINS	3-13
3.11.	BIOLOGICAL RESOURCES	3-14
3.12.	CULTURAL RESOURCES	3-18
3.13.	ENVIRONMENTAL RESTORATION PROGRAM / HAZARDOUS WASTE	3-20
SECTION 4.	ENVIRONMENTAL CONSEQUENCES	4-1
4.1.	LAND USE	4-1
4.2.	SOCIOECONOMIC CONDITIONS	4-1
4.3.	OCCUPATIONAL SAFETY AND HEALTH	4-2
4.4.	UTILITIES	4-3
4.5.	TRANSPORTATION	4-7
4.6.	NOISE	4-8
4.7.	AIR QUALITY	4-9
4.8.	GEOLOGY AND SOILS	4-10

4.9.	SURFACE WATER AND GROUNDWATER	4-11
4.10.	FLOODPLAINS	4-13
4.11.	BIOLOGICAL RESOURCES	4-13
4.12.	CULTURAL RESOURCES	4-16
4.13.	ENVIRONMENTAL RESTORATION PROGRAM / HAZARDOUS WASTE	4-18
4.14.	CUMULATIVE IMPACTS	4-21
SECTION 5.	MEASURES TO REDUCE POTENTIAL FOR IMPACT	5-1
SECTION 6.	CONSULTATION AND PUBLIC NOTICE	6-1
6.1.	TOWN OF SCITUATE CONSULTATION	6-1
6.2.	MASS COMMISSION OF INDIAN AFFAIRS CONSULTATION	6-2
6.3.	MASHPEE WAMPANOAG TRIBE CONSULTATION	6-5
6.4.	WAMPANOAG TRIBE OF GAY HEAD (AQUINNAH) CONSULTATION	6-13
6.5.	MASSACHUSETTS HISTORICAL COMMISSION CONSULTATION	6-17
6.6.	SITUATE HISTORICAL COMMISSION CONSULTATION	6-26
6.7.	NATURAL HERITAGE & ENDANGERED SPECIES CONSULTATION	6-28
6.8.	U.S. FISH AND WILDLIFE CONSULTATION	6-33
6.9.	NORTH AND SOUTH RIVERS WATERSHED ASSOCIATION CONSULTATION	6-37
6.10.	MASSACHUSETTS OFFICE OF COASTAL ZONE MANAGEMENT CONSULTATION	6-41
6.11.	PUBLIC NOTICE PRINTED IN LOCAL NEWSPAPERS, 9 OCTOBER 2014	6-42
SECTION 7.	GENERAL CONFORMITY – RECORD OF NON-APPLICABILITY	7-1
SECTION 8.	LIST OF PREPARERS	8-1
SECTION 9.	REFERENCES	9-1

LIST OF FIGURES:

General Location of Fourth Cliff Recreation Annex	1-2
Existing Fourth Cliff Site Plan.....	3-5
Soil Survey (NRCS 2014).....	3-12
FEMA Flood Map, July 7, 2012 (FEMA 2012)	3-13

LIST OF TABLES:

Economic Impact Table (HAFB, 2013a)	3-2
BMP or Other Measures to Reduce Impact:	5-1

LIST OF ACRONYMS:

AAQS	Ambient Air Quality Standards	DoD	Department of Defense
ABG	Air Base Group	DoDEA	Department of Defense Education Activity
ACM	Asbestos Containing Material		
AFB	Air Force Base	EA	Environmental Assessment
AFI	Air Force Instruction	EIS	Environmental Impact Statement
AFCRL	Air Force Cambridge Research Lab	EHS	Environmental Health and Safety
AFMC	Air Force Material Command	EMCS	Energy Management Control System
AFOSHSTD	Air for Occupational Safety and Health Standard	EO	Executive Order
AFRL	Air Force Research Lab	ESC	Electronic Systems Center
AT/FP	Antiterrorism/Force Protection	FEMA	Federal Emergency Management Agency
Bgs	Below Ground Surface	FIRM	Federal Insurance Rate Map
BMP	Best Management Practice	FONSI	Finding of No Significant Impact
BRAC	Base Realignment and Closure	FY	Fiscal Year
C&D	Construction and Demolition	GHG	Greenhouse Gas
CAA	Clean Air Act	gpm	Gallons per minute
CE	Civil Engineering	gsf	Gross Square Feet
CEQ	Council on Environmental Quality	HAFB	Hanscom Air Force Base
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	HARM	Hazard Assessment Rating Methodology
CFR	Code of Federal Regulations	HAZMAT	Hazardous Materials
CH4	Methane	ICP	Integrated Contingency Plan
CHP	Central Heat Plant	IRP	Installation Restoration Program
CO	Carbon Monoxide	JFHQ	Joint Force Headquarters
CO2	Carbon Dioxide	k-W	Kilowatt
CWP	Chilled Water Plant	kWh	Kilowatt-hour
dB	Decibel	kV	Kilovolt

LCMC	Life Cycle Management Center	NEPA	National Environmental Policy Act
LEED	Leadership in Energy and Environmental Design	NHESP	Natural Heritage and Endangered Species Program
MA	Massachusetts	NOI	Notice of Intent
MAARNG	Massachusetts Army National Guard	NOx	Nitrous Oxide
MAANG	Massachusetts Air National Guard	NPDES	National Pollutant Discharge Elimination System
MassDEP	Massachusetts Department of Environmental Protection	NCRS	Natural Resources Conservation Service
Massport	Massachusetts Port Authority	OSHA	Occupational Safety and Health Administration
MCF	Million cubic feet	PA	Programmatic Agreement
MCP	Massachusetts Contingency Plan	PAL	Public Archeology Laboratory
MEPA	Massachusetts Environmental Policy Act	Pb	Lead
mgd	Million gallons per day	PCBs	Polychlorinated Biphenyls
MHC	Massachusetts Historic Commission	PEL	Personal Exposure Limit
MILCON	Military Construction	PM	Particulate Matter
MIT	Massachusetts Institute of Technology	POV	Personal Occupancy Vehicle
MIT LL	Massachusetts Institute of Technology Lincoln Laboratory	RACT	Reasonably Available Control Technology
MPE	Maximum Permissible Exposure	RFTA	Reserve Forces Training Area
MS4	Municipal Separate Storm Sewer System	R&D	Research and Development
MSDS	Material Safety Data Sheets	RCRA	Resource Conservation and Recovery Act
MWRA	Massachusetts Water Resource Authority	RV	Recreational Vehicle
NAAQS	National Ambient Air Quality Standards	SAPS	Satellite Accumulation Points
		SARA	Superfund Amendments and Reauthorization Act
		SHPO	State Historic Preservation Officer
		SF	Square feet

SIP	State Implementation Plan	USACE	U.S. Army Corps of Engineers
SO ₂	Sulfur dioxide	USAF	U.S. Air Force
SWMP	Stormwater Management Plan	USFWS	U.S. Fish & Wildlife Service
SWPPP	Stormwater Pollution Prevention Plan	UST	Underground Storage Tank
		USGBC	United States Green Building Council
TSCA	Toxic Substances Control Act		
U.S.	United States	VOC	Volatile Organic Carbons
USEPA	U.S. Environmental Protection Agency		

Section 1. Purpose of and Need for the Proposed Action

1.1. Background

The proposed project is within the Fourth Cliff Recreation Annex (Fourth Cliff), which is owned, operated, and maintained by the United States Air Force for the purpose of providing passive and active recreational activities to military members, Department of Defense civilian employees, eligible contractors, and their families. Fourth Cliff consists of 56 acres on the northern tip of Humarock Peninsula in Scituate, Massachusetts, about 50 miles southeast of Hanscom Air Force Base. Humarock Peninsula is an oblong, elevated landform comprised of dense glacial till, commonly referred to as a drumlin. The cliffs on the east and north sides of Fourth Cliff are “coastal bank” as defined by Massachusetts regulations (3.10 CMR 10.30(2)), and are bordered by “coastal beach,” which on the east side meets Cape Cod Bay of the Atlantic Ocean and on the north side abuts the confluence of the North and South Rivers, known as the New Inlet (Figure 1). Also, on the north and east sides of the site, beyond the coastal beach, is a rocky, intertidal shore. In addition to being rocky, the waters surrounding Fourth Cliff are shallow. The west side of the Fourth Cliff site is within the Riverfront Area of New Inlet (the confluence of the North and South Rivers). All of Fourth Cliff’s shoreline is subject, at times, to coastal storm flowage.

The southern boundary of the Fourth Cliff site is bordered by residential properties. Currently occupying the site are 17 cottages, a four-room motel-style complex, 11 RV camper sites (with electrical, potable water, and wastewater hookups), four tent sites, four picnic areas, a pavilion, a bath house, a recreation center (containing management office space, a small restaurant, a snack shop, a souvenir shop, a game room, and an observation deck), and the manager's residence. Also on-site are the preserved remains of a World War II era coastal defense battery comprised of two observation towers and a reinforced concrete and mounded earth bunker/command post. The coastal defense battery is eligible for inclusion on the National Register of Historic Places. Fourth Cliff is used year-round, but the occupancy rate is greatest during mid-June to mid-September.



General Location of Fourth Cliff Recreation Annex

This Environmental Assessment (EA) addresses the Proposed Action and the No-Action Alternative in accordance with the National Environmental Policy Act (NEPA) (42 United States Code [USC] 4321-4347), Council on Environmental Quality (CEQ, 1978) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] §§ 1500-1508), and 32 CFR 989 et seq., *Environmental Impact Analysis Process* (formerly known as Air Force Instruction [AFI] 32-7061). NEPA procedures were established to ensure environmental information is available to public officials and citizens before decisions are made and before actions are taken.

According to these instructions, the environmental assessment is a written analysis which serves to (1) provide analysis sufficient to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI); and (2) aid federal agencies in complying with NEPA when no EIS is required. If this EA determines the proposed action would significantly degrade the environment, significantly threaten public health or safety, or generate significant public controversy, then an EIS would be completed. An EIS involves a comprehensive assessment of project impacts and alternatives, as well as a high degree of public input. Alternatively, if this EA results in a FONSI, then an EIS would not be required. The EA is not intended to be a scientific document. The level and extent of detail and analysis in the EA is commensurate with the importance of the environmental issues involved and with the information needs of both the decision-makers and the general public.

This EA addresses the site-specific impacts of demolishing two (2) existing cabins and constructing eight (8) RV sites at Fourth Cliff, and evaluates the consequences of the proposed action and alternatives on the natural and man-made environments.

1.2. Purpose of and Need for the Proposed Action

The purpose of the proposed action is to modify and upgrade the existing Fourth Cliff Recreation Annex and associated facilities to meet the current needs and demands of its users; all active and retired military, eligible DoD civilians, and authorized contractors. Currently, access to the existing Recreational Vehicle (RV) sites is limited due to erosion of the adjacent cliff. Building 35 and Building 37 are in major disrepair and pose increasing maintenance and operating costs. Demolishing Building 35 and Building 37 and constructing eight (8) new RV sites at the location of the demolished buildings would eliminate costs to maintain and operate the cabins, and better meet the needs and demands of its users.

If the current situation continued at the Hanscom AFB Fourth Cliff Recreation Annex, then use of the site will continue to be impaired. The cabins would continue to deteriorate due to insufficient resources needed to sustain them and the continuous coastal erosion will result in making the current RV sites becoming completely non-accessible. Safety concerns related to deteriorating facilities and infrastructure will increase. Costs related to maintain the cabins, utilities and housekeeping would continue.

1.3. Applicable Federal Laws and Regulations

- 32 CFR 989, Environmental Impact Analysis Process
- 36 CFR Part 800, Protection of Historic Properties
- 40 CFR §§ 1500-1508, Council of Environmental Quality
- AFI 32-7064, Integrated Natural Resources Management
- AFI 32-7065, Cultural Resources Management Program
- Archaeological Resources Protection Act
- Clean Air Act
- Clean Water Act
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- DoDI 4710.02 (Interactions with Federally-Recognized Tribes)
- Endangered Species Act of 1973
- Executive Order (EO) 11990 (Protection of Wetlands)
- EO 11988 (Floodplain Management)
- EO 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations)
- EO 13175 (Consultation and Coordination with Indian Tribal Governments)
- EO 13514 (Federal Leadership in Environmental, Energy, and Economic Performance)
- Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings
- National Environmental Policy Act (NEPA)
- National Historic Preservation Act (NHPA)
- Occupational Safety and Health Administration (OSHA) Regulations
- Pollution Prevention Act of 1990
- Resource Conservation and Recovery Act (RCRA)
- Rivers and Harbors Act
- Toxic Substances Control Act (TSCA) of 1970

1.4. Required Federal, State, and Local Permits

- (NPDES) General Permit for Stormwater Discharges from Construction Activities (only if work is greater than 1 acre)
- MassDEP BWP AQ 06 – Notification Prior to Construction or Demolition
- Mass DEP Asbestos Notification ANF-001
- Hanscom Digging Permit

1.5. Agencies and Persons Consulted

Hanscom AFB consulted with the Town of Scituate, Massachusetts Historical Commission, Massachusetts Office of Coastal Zone Management (CZM) South Shore Regional Office, Scituate Historical Commission, U.S. Fish and Wildlife Service, Massachusetts National Heritage and Endangered Species Program, North and South River Watershed Association, Massachusetts Commission of Indian Affairs, the Wampanoag Tribe of Gay Head (Aquinnah), and the Mashpee Wampanoag Tribe. Section 6 includes copies of consultation.

Mr. Jim Peters- Director of the Massachusetts Commission on Indian Affairs

Mr. Cedric Cromwell – Mashpee Wampanoag Tribe

Ms. Ramona Peters – Mashpee Wampanoag Tribe

Mr. Tobias Vanderhoop-Wampanoag Tribe of Gay Head (Aquinnah)

Ms. Bettina Washington – Wampanoag Tribe of Gay Head (Aquinnah)

Mr. Jason Burtner- Massachusetts CZM

Ms. Brona Simon-Massachusetts Historical Commission

Ms. Misty-Anne R. Marold - Massachusetts National Heritage and Endangered Species Program

Ms. Paula Christie - North and South Rivers Watershed Association

Mr. Doug Smith - Scituate Historical Commission

Ms. Susi von Oettingen-US Fish and Wildlife Service

Copies of the Draft Renovate Fourth Cliff EA and FONSI were made available for agencies and public review at the main public library in Scituate, and at the Hanscom AFB Environmental Office, Building 1825 beginning on 9 October 2014. The public comment notification is included in Section 6 of this EA.

Section 2. Description of the Proposed Action and Alternatives

2.1. Proposed Action – Renovate Fourth Cliff Recreational Annex

The purpose of the proposed action is to modify and upgrade the existing Fourth Cliff Recreation Annex and associated facilities to meet the current needs and demand of its users. The proposed action is to demolish cabins Building 35 and Building 37 and construct eight (8) Recreational Vehicle (RV) sites at Fourth Cliff Recreation Annex so that profit is maximized and environmental impacts minimized. Currently, the cabins are rapidly deteriorating, and access to existing RV sites does not meet user demand. The proposed action to Renovate Fourth Cliff Recreational Annex includes the following includes two phases: 1) Demolition of Cabins Building 35 and Building 37 and 2) Construction of eight (8) new RV sites.

2.1.1. Demolition of Cabins Building 35 and Building 37

- Demolish recreational site lodging facilities Building 35 and Building 37.
- Remove all the supporting utilities associated with Building 35 and Building 37 and cap them 5 feet from the associated main (water and sanitary sewer). Remove all overhead electrical lines from Building 35 and Building 37.
- Provide fill so that the new elevation is at the same elevation as the crown of the adjacent road. The fill must be compacted with 95% and compaction test will be required.
- Any area outside the construction limits that are disturbed or damaged during the demolition would be repaired and/or replaced to include but not limited to asphalt, landscaping and utilities to existing or better conditions.
- Provide erosion control measures to prevent soil erosion and runoff.
- Maintain a Stormwater Pollution Prevention Plan per all state and federal regulations.
- Apply for and maintain all required permits
- Hazardous waste abatement and disposal

2.1.2. Construction of 8 RV sites

- Prepare documents for electrical connections for RV sites and to remove the overhead electrical lines to place them underground.
- Prepare, submit and secure all required permits to include but not limited to local, state, conservation, coastal permits and all stormwater permits and documents.
- Prepare the site for the construction of the RV sites.
- Construct a one-way stone access drive with turning radius for a Type Bus-40.
- Construct eight (8) new stone RV sites with a 10'x20' concrete pad.
- Ensure positive drainage away from the new RV sites, new access drive and existing cottages.
- Construct a new gravity sanitary sewer main from the new RV sites to an existing manhole.
- Install water, sewer and electrical connection to each of the new RV sites as allowed by federal, state and local regulations.
- Provide and install landscaping to provide screening between each site.
- Provide compaction test results for compaction under gravel access road and RV sites to be 95%.

2.2. Alternatives

Hanscom AFB is evaluating two options to renovate the Hanscom AFB Fourth Cliff Recreational Annex: 1) Renovate the Fourth Cliff Recreational Annex; and 2) take no further action and thereby continuing operation of the Fourth Cliff Recreational Annex in the existing conditions.

Options analyzed in detail in this EA include:

- Option 1 is the Preferred Alternative, and thus the Proposed Action evaluated in this EA.
- Option 2 is the No-action Alternative, and is described in more detail below.

2.2.1. No-Action Alternative

The Council on Environmental Quality's (CEQ) regulations implementing NEPA requires that a no-action alternative be evaluated. The no-action alternative maintains the status quo. Under the no-action alternative, the Fourth Cliff Recreational Annex would remain in its current condition and there would be no modifications the site. The no-action alternative does not meet the needs of the proposed action because the current situation will continue at the Hanscom AFB Fourth Cliff Recreational Annex, and the facility will retain its current limitations such as limited access to RV users and safety concerns. Maintenance and operational costs will increase for Cabins Building 35 and Building 37 if the cabins were to remain.

2.3. Selection Standards

The following standards were used to determine reasonable alternatives:

- 1) Environmental Impact
- 2) Meets purpose and need of proposed action

Resources have not been committed prejudicing the consideration of reasonable alternatives.

2.4. Alternatives Eliminated from Detailed Analysis

The following alternatives for the proposed Renovation of the Fourth Cliff Recreational Annex underwent a preliminary evaluation and were not determined to be reasonable alternatives. Two other alternatives, Maintain Cabins Building 35 & Building 37 and Construct Four (4) RV sites Alternative and the Restore Cabins Building 35 and Building 37 Alternative, were considered. A Shoreline Stabilization Project to address the cliff erosion is being considered in a separate project. Shoreline Stabilization is not evaluated further in this EA, A separate EA will be prepared to address the shoreline stabilization action. The selection standards listed above were considered for each alternative. Below summarizes why these alternatives are not considered reasonable alternatives and have been eliminated from detailed analysis in this EA.

2.4.1. Maintain Cabins Building 35 & Building 37 and Construct Four RV sites

Maintaining the existing cabins would result in more maintenance and operating costs than if the cabins were converted to RV sites. Maintaining the cabins would not meet the needs of potential RV users especially if the existing RV sites are lost due to erosion. The additional four (4) RV sites would be on already disturbed land so the environmental impact would not be significant but there would be an increase in impervious surface. This alternative does not meet purpose and need of the proposed action and is eliminated from further analysis.

2.4.2. Restore Cabins Building 35 & Building 37:

Restoring the existing cabins would require costly demolition and construction expenses, and result in more maintenance and operating costs than if the cabins were converted to RV sites. Restoring the cabins would not meet the needs of potential RV users especially if the existing RV sites are lost due to erosion. The environmental impact would not be significant, however this alternative does not meet purpose and need of the proposed action and is eliminated from further analysis.

Section 3. Affected Environment

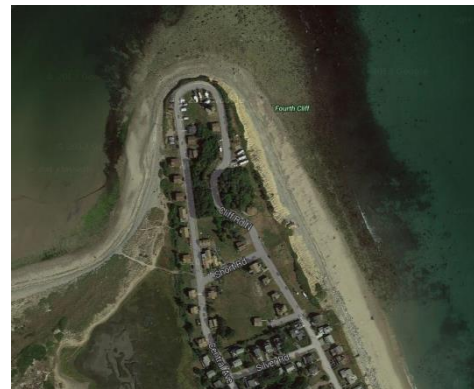
3.1. Land Use

The current land use at the Fourth Cliff Recreational Annex is passive and active, water-dependent recreation for Department of Defense military and civilian staff members and their families. The facility contains 17 cottages, a motel, 11 RV camper sites, four tent sites, four picnic areas, a pavilion, a bath house, a recreation center, and a manager's residence, all of which are interconnected by a network of paths and bituminous roadways, in addition to World War II buildings and coastal defense structures. Adjacent to the southern boundary of the site is an area of privately owned residential properties.

The site also contains wetland resource areas protected under the Massachusetts Wetlands Protection Act (WPA 310 CMR 10.0), namely areas classified as Coastal Bank, Coastal Beach, Salt Marsh, Land Subject to Coastal Storm Flowage, Riverfront Area, and Buffer Zone.

The surrounding land uses include:

- East and north sides are “coastal bank” as defined by Massachusetts regulations (3.10 CMR 10.30(2)), and are bordered by “coastal beach.”
- The east side meets Cape Cod Bay of the Atlantic Ocean
- The north side abuts the confluence of the North and South Rivers
- The north and east sides of the site, beyond the coastal beach, is a rocky, intertidal shore.
- The west side of the Fourth Cliff site is within the Riverfront Area of New Inlet (the confluence of the North and South Rivers).
- The southern boundary of the Fourth Cliff site is bordered by residential properties



**Aerial Photo of Fourth Cliff
Recreational Annex from Google Maps**

3.2. Socioeconomic Conditions

Hanscom AFB provides worldwide support for the Air Force Life Cycle Management Center (AFLCMC) and outstanding quality-of-life opportunities for military personnel, their family members and the many workers who are part of Team Hanscom. One of five centers under Air Force Materiel Command, the AFLCMC is the single center responsible for total life cycle management of Air Force weapon systems. The AFLCMC mission is to deliver affordable and sustainable war-winning capabilities to U.S. and international partners -- on time, on cost, anywhere, anytime from cradle to grave. Hanscom's host unit is the 66th Air Base Group, which is part of AFLMC. The men and women of the 66th Air Base Group provide outstanding services to more than 3,000 active duty, Reserve and National Guard military personnel and DoD civilians who work and live at Hanscom Air Force Base. Additionally, they support more than 125,000 retired military personnel, annuitants and spouses living in the six-state New England area and New York (HAFB 2013).

The workforce at Hanscom AFB includes military (active-duty), military (reservists), DoD civilian, Non-DoD Civilian, and contractors. Hanscom AFB maintains a 5,828-strong total workforce. Hanscom AFB's Total Estimated Economic Impact is approximately \$6.2 billion with more than 5,500 primary Hanscom jobs and 14,500 secondary jobs created (HAFB, 2013).

FY Contract Expenditures	\$5.6 billion
FY 11 Active Duty Payroll	\$203 million
FY 11 Reservist Payroll	\$1.7 million
FY11 DoD Civilian Payroll	\$356 million

Economic Impact Table (HAFB, 2013a)

The new Massachusetts National Guard Joint Force Headquarters, an administrative complex to support state and federal missions required of the state's National Guard, became operational Nov. 5, 2012 at Hanscom AFB.

Fourth Cliff is located in Plymouth County, Massachusetts in the Town of Scituate, which is bordered by the Atlantic Ocean on the east and north, Marshfield on the south, Norwell on the southwest, Hingham on the west, and Cohasset on the northwest. Scituate has a land area of 17.2 square miles, a water area of 14.6 square miles, and a population of 17,863. The median age of Scituate residents is 40.7 (older than the average age in the United States of 35.3). About 15.3 percent of the population is 65 years and over, compared to 12.4 percent nationally. The white population in Scituate is 96.71 percent of the total population. The U.S. average is 75.1 percent. There are 9,243 Scituate residents in the labor force. This represents 67.6 percent of the total population, compared to the national average of 63.9 percent. The median household income in the community is \$70,868. Median household income in the U.S. is \$41,994. Only 2.6 percent of Scituate residents are living below the poverty level. The percentage of individuals living beneath the poverty level in the country is 12.4 percent (U.S. Census 2000).

Fourth Cliff has 26 employees from May to August. Six (6) full-time and 20 part-time. Fourth Cliff reduces staff dramatically from Sep to April to four (4) full-time and three (3) part-time.

3.3. Occupational Safety and Health

All government organizations on Hanscom AFB and its geographically separated units (GSUs) like Fourth Cliff are provided industrial hygiene support by the Bioenvironmental office (66 MDS/SDOJ). The Public Health office (66MDS/SGOL) provides support for occupational health training, and organizes and manages the Occupational and Environmental Health Working Group (OEHWG). The OEHWG is chaired by physicians from Flight Medicine. Flight Medicine handles occupational physicals (including audiograms) and work related injury care for

government workers. Contractor operations on Hanscom AFB and its GSUs are not supported by the base occupational health programs (i.e., Bioenvironmental Engineering, Public Health, and Occupational Medicine). Contractors are required to manage their own occupational health programs including industrial hygiene surveillance, worker health and safety training, hazard abatement, and medical surveillance.

All government organizations on Hanscom AFB and its GSUs are provided occupational and non-occupational safety support by the 66 ABG Safety Office. Support includes protecting the 66th Air Base Group (ABG) and the AFLCMC's personnel and resources through expert management of the 66th ABG Safety Program that incorporates the Commander's ground, flight, system, and weapons safety programs. The 66 ABG Safety Office ensures all mishaps are investigated and reported IAW AF instructions. Major mishap prevention programs include inspections, hazard abatement, mishap investigation, and training. Contractor operations on Hanscom AFB are required to manage their own safety programs including hazard abatement, mishap reporting and recording, and safety training.

All contracts for major construction must follow the base civil engineering design review process, and the base Bioenvironmental and Safety offices are included in the process. While it would be the responsibility of the awarded contractor(s) to ensure the safety and health of contractor employees and others at the work site, this process ensures that applicable safety and health requirements are included in the final drawings and specifications for major construction contracts.

There are occupational health and safety concerns related to cliff erosion caused by rain water runoff and extreme storm events. A separate project of high priority is programed to address the cliff erosion and related safety concerns.

3.4. Utilities

3.4.1. Existing Facility

The Fourth Cliff Recreational Annex currently includes the following:

- 17 cottages (Buildings 1,2, 3,6, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 33, 35, 37, 39)
- Four-room motel-style complex (Building 36)
- 11 RV camper sites (with electrical, potable water, and wastewater hookups)
- Four tent sites
- Four picnic areas,
- Pavilion
- bath house (Building 19)
- Rec center (Building 7)
- Manager's residence (Building 4)



Existing Fourth Cliff Site Plan

3.4.2. Water Supply

The water system at the Fourth Cliff Recreational Annex provides water hookups for most of the existing support buildings, cottages, and RV sites. Approximately 1,200 feet of underground waterline run down Central Avenue, Short Road, and Cliff Road (Portion South from where Cliff Road intersects with Short Road. Water is supplied from the Town of Scituate. The Town of Scituate is responsible for testing of drinking water and notifying the public of any deficiencies.

3.4.3. Wastewater

Sanitary wastewater at the Fourth Cliff Recreational Annex is managed in a septic system that consists of two (2) lift stations, a tight tank, a drainage pit, a leach field, approximately 1000 feet of underground wastewater lines. A lower lift station (located between Buildings 1 and 3) pumps sanitary waste through underground lines from Buildings 1, 3, 4, 5, 6, 7, 8, 33, 36, and 39 to the upper lift station (located north of Building 6). Sanitary waste from Buildings 9, 10, 11, 12, 13, 14, 16, and 19 flows by gravity to the upper lift station through underground piping. The upper lift station pumps the sanitary waste through underground piping and drains into a drainage pit and leach field located in the area east of Buildings 4 and 2, and west of the site of the proposed action

Sanitary waste from the RV sites on northern part of the property and Building 18 flow by gravity to a tight tank near Building 19. The tight tank is not connected to other parts of septic system and is emptied periodically by contract. The sanitary wastewater system at Fourth Cliff is in good working order.

3.4.4. Solid Waste

Approximately 83 tons of solid wastes are generated each week by Hanscom AFB. Some of this material is reused on base, but the majority is removed from Hanscom AFB by private contractors and disposed of by incineration or directly hauled to materials recovery facilities for recycling. The major sources of waste include community operations, offices, and industrial

areas. The types of solid waste generated include food, various grades of office paper, newspaper, cardboard, cans, glass and plastic containers, scrap metals, as well as significant quantities of yard waste and construction and demolition debris. On an annual basis, Hanscom AFB generates approximately 1,555 tons of municipal solid waste and 318 tons of construction and demolition wastes, both of which are incinerated off-base with heat recovery or recycled. Additional materials diverted from the waste stream on an annual basis include: 160 tons of wood waste (pallets, packaging), 1,995 tons of compost/organic materials (tree trunks), 77 tons of metals, 179 tons of general recyclables, and 15 tons of computers/electronics (HAFB, 2010g).

Base civil engineering oversees the solid waste/recycling support contract that supports Hanscom AFB and the Fourth Cliff Recreational Annex. Fourth Cliff has one (1) six (6) yard and one (1) eight (8) yard refuse (solid waste) dumpster and one (1) recycling dumpster. One solid waste dumpster is located by Building 18 and the other solid waste dumpster and the recycling dumpster is located next to the Rec Hall. Each cabin has their own 90 gallon container located at their front entrance. All dumpsters are emptied weekly through the Hanscom AFB support contract (HAFB 2014a).

In addition to meeting installation recycling goals, feasible pollution prevention measures must be analyzed. Less toxic alternatives for materials used must be considered. The installation Hazardous Material Management Program processes requests for materials to be used and analyzes less toxic materials to reduce sources of pollution.

3.4.5. *Electricity*

Most of the electrical system at the Fourth Cliff Recreational Annex is provided underground with the exception of a few aboveground utility lines and poles located near the site of the proposed action. Currently electricity is supplied to all existing buildings and RV sites.

3.4.6. Telecommunications

All cabins and support buildings at the Fourth Cliff Recreational Annex have telephone connections. The Rec Hall is the only building with an internet connection.

3.4.7. Propane

Each building, with the exception of the Rec Hall and manager's quarters, has two (2) 100 gallon propane tanks connected to the side of the building for heat. RVs bring their own propane tanks that are smaller, typically 20 or 40 lbs. RVs cannot connect to any of the stationary tanks at Fourth Cliff and must be their own propane. The RVs can use propane primarily for heat, refrigeration, and cooking. Small propane tanks for RVs are not sold at Fourth Cliff.

3.5. Transportation

Access to the Fourth Cliff Recreational Annex is via Central Avenue, which runs along the Humarock Peninsula. Central Avenue is shared by numerous year-round and seasonal homes along the peninsula. There are homes situated along the cliff immediately to the south of the Fourth Cliff property. There are two gates to the property. The gate on Cliff Road is permanently blocked off and no one can enter the property at this gate. The gate on Central Avenue is the only way to enter the property.

Access to Central Avenue north of the intersection of Central Avenue and Short Road Avenue is blocked due to erosion problems on the northern part of the property. From this point access on Central Avenue and Cliff Road north of Short Road is one way going north to west. This allows vehicles to loop the northern part of the property counter-clockwise. Traffic on Short Road, and Central Avenue and Cliff Road south of Short Road is two-way traffic.

3.6. Noise

Sound levels are expressed in decibels and are usually “A-weighted” for human hearing. Construction and operation of the facility must comply with the provisions of the MassDEP Noise Control Regulations (310 CMR 7.10). The MassDEP has established a Noise Level Policy for implementing this regulation. The policy specifies that the ambient sound level, measured at the property line of the facility or at the nearest inhabited buildings, shall not be increased by more than 10 decibels weighted for the "A" scale [dB(A)] due to the sound from the facility during its operating hours. A source of sound is considered to be in compliance with the MassDEP noise regulation if the source does not: “Increase the broadband sound level by more than 10 dB(A) above ambient, or produce a pure tone condition”.

As a park and recreation area, existing sound levels at Fourth Cliff are relatively low, and operating noise is limited to sounds generated from human activity in a cottage community. Sound levels may be sporadically elevated due to periods of higher human activity (e.g., during transition days when occupants move in or out of cottages and RVs). Background sound levels will vary both spatially and temporally depending on proximity to area sound sources, roadways, and natural sounds. Principal contributors to the existing acoustic environment include motor vehicle traffic on local roadways, boats, periodic aircraft flyovers, and natural sounds such as wind, birds, insects, and ocean wave action.

3.7. Air Quality

The United States Environmental Protection Agency (EPA) developed National Ambient Air Quality Standards (NAAQS) for criteria pollutants. The criteria pollutants that have standards are sulfur dioxide, particulate matter, carbon monoxide, ozone, nitrogen dioxide, and lead. Ozone is controlled by regulating its precursors, volatile organic chemicals, and nitrogen oxides. NAAQS are implemented by states through a state implementation plan (SIP).

The Clean Air Act prohibits a federal agency from engaging in an activity that would: (1) cause or contribute to any new violation of any air quality standard in any area; (2) increase the frequency or severity of any existing violation; or (3) delay timely attainment. Under the Clean Air Act, the conformity rule applies to federal actions occurring in non-attainment or maintenance areas. The conformity rule defines applicability criteria and includes several exemptions and emissions thresholds, which determine whether the federal action requires a conformity determination. Non-exempt federal actions with total direct and indirect emissions that remain below the de minimis thresholds and are not regionally significant do not require conformity determinations.

Fourth Cliff is located in the northeast Ozone Transport Region (OTR), which is comprised of all coastal states extending from northern Virginia to Maine. The Clean Air Act Amendments of 1990 established the OTR. The Act requires "reasonably available control technology" for many existing pollution sources in certain non-attainment areas and throughout the OTR. States in the OTR are required to submit a SIP and install a certain level of controls for the pollutants that form ozone, even if they meet the ozone standards.

The MassDEP is responsible for monitoring outdoor air quality in Massachusetts and operates an extensive network of air monitoring stations throughout the state. MassDEP submits all ambient air quality data to the national Air Quality System database that is administered by the EPA. The closest air monitoring stations to Fourth Cliff are located in the city of Boston and the town of Milton. Ozone is the only pollutant for which Massachusetts monitors indicate violations of a NAAQS (MassDEP 2008). For all other criteria pollutants, ambient air quality concentrations in Massachusetts are well below the applicable standards. The proposed project is located in a nonattainment area for ozone. An applicability analysis has been completed and no conformity determination is required (Section 7).

3.8. Geology and Soils

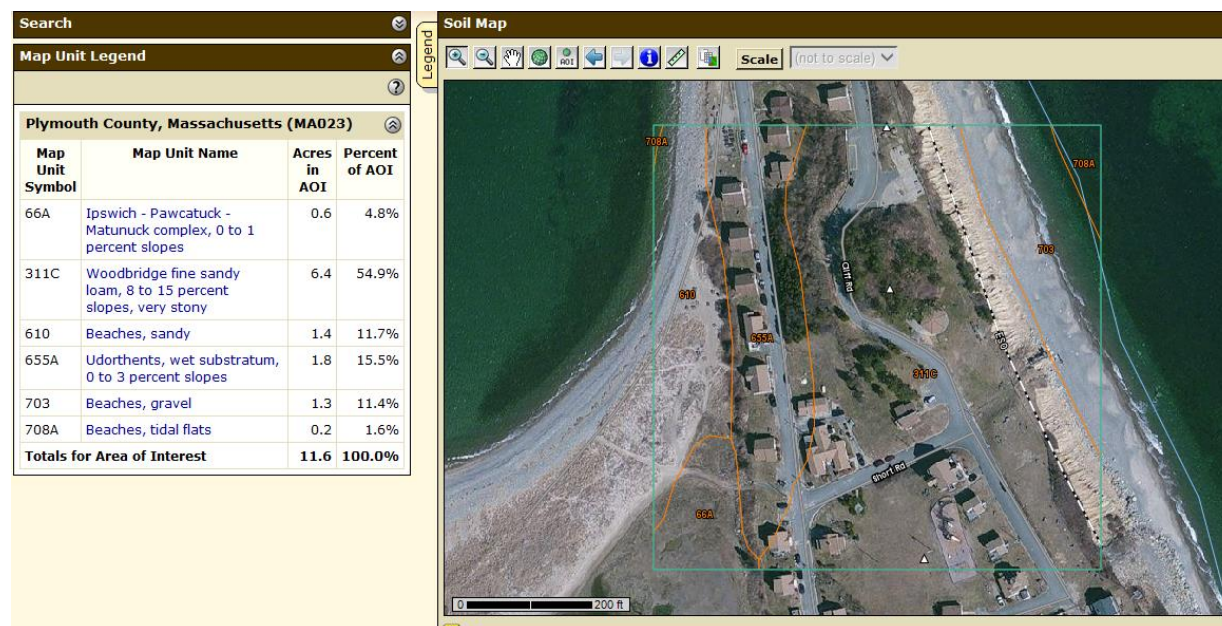
3.8.1. Geology

Fourth Cliff consists of 56 acres on the northern tip of Humarock Peninsula in Scituate, Massachusetts. Humarock Peninsula is an oblong, elevated landform comprised of dense glacial till, commonly referred to as a drumlin. The cliffs on the east and north sides of Fourth Cliff are “coastal bank” and are bordered by “coastal beach,” which on the east side meets the Atlantic Ocean and on the north side abuts the confluence of the North and South Rivers, known as the New Inlet. Also, on the north and east sides of the site, is a rocky, intertidal shore. Fourth Cliff is one of a series of drumlins found along the shoreline and is generally comprised of glacial till. On the eastern side, the slope angles range from approximately 1.7 to 1 Horizontal to 1 Vertical, (1.7 to 1 H:1 V) along the length of the slope. Subsurface conditions suggest that retrogression of the bluff are the result of surface erosion of the face of the slope due to surface water run-off, and undercutting at the toe of the bluff as a result of wave action, resulting in over-steepening of the bluff. The wave action not only erodes the toe of the natural slope but also removes any talus material that has developed, at the toe, as the upper part of the slope erodes and flattens.

3.8.2. Soils

From the surface, granular soils can be found from depths of 31 to 51 feet below the existing grade. The upper sands are medium dense to dense, with N- values of 11 to 38 and are granular, consisting of a mixture of brown/tan sand, trace silt, and trace gravel. Below depths of at least six feet, soils become denser and the gravel content increases. Cobbles and boulders can also be found within the lower layers and along the toe of the beach.

Soil survey (left) for the area of interest (AOI), the Fourth Cliff, are shown below on the soil map (right):



Soil Survey (NRCS 2014)

3.9. Surface Water and Groundwater

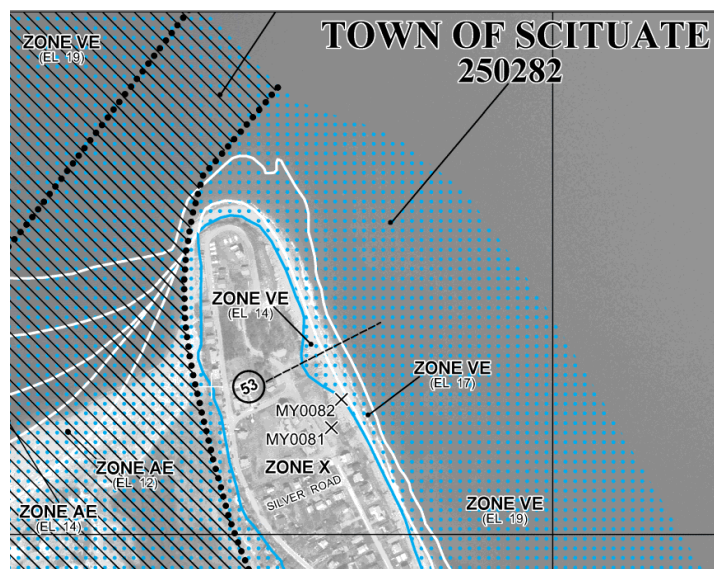
Fourth Cliff is bordered on the east by Cape Cod Bay of the Atlantic Ocean and on the north and west side by New Inlet which is the mouth of the North River. The water can be characterized as estuarine and primarily saline. The waters surrounding Fourth Cliff are shallow and the shoreline is subject to coastal storm flowage. Stormwater runoff from Cliff Road and the parking areas may contain a small amount of spilled oil, grease, or other automotive fluids. Additionally, fertilizer residue from general landscaping may be contained in runoff.

The Fourth Cliff coastal bank is eroding at a rate of approximately 1,500 cubic yards per year. This translates to the top edge of the bank eroding inland at a rate of approximately one foot annually. Since 1958, approximately 40 feet of coastal bank material has been lost. The erosion is caused from stormwater runoff, wave run-up from major storm events and groundwater seepage. Base operations have not reached groundwater at Fourth Cliff Recreational Annex which is estimated at 6 to 8 feet below ground surface (bgs).

3.10. Floodplains

Executive Order 11988, Floodplain Management, requires that each federal agency “shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains.”

An examination of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for the Town of Scituate showed that proposed action was classified as in flood area “Zone X (unshaded).” On the FEMA website, “The areas of minimal flood hazard, which are the areas outside the [Special Flood Hazard Area] SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (unshaded) (FEMA 2013).” Therefore, the proposed site is not within a 100-year floodplain, as defined by E.O. 11988.



FEMA Flood Map, July 7, 2012 (FEMA 2012)

3.11. Biological Resources

3.11.1. Vegetation

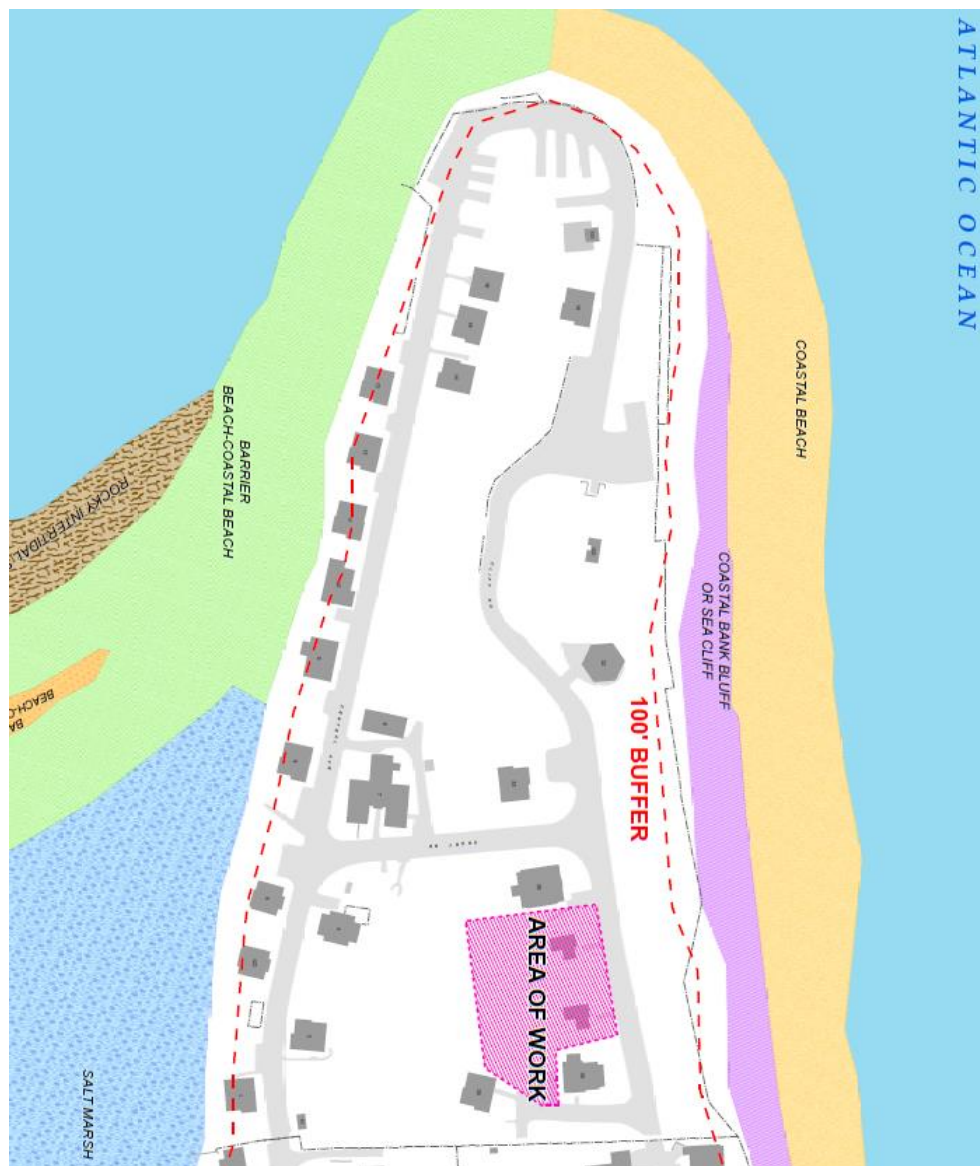
Vegetation on Fourth Cliff is typical of most coastal areas in the northeast. Three community types can be found on Fourth Cliff: coastal dune, coastal beach, and salt marsh. The coastal dune is dominated by beach grass (*Ammophila breviligulata*). Other species found on the coastal dune in sporadic patches include salt-spray rose (*Rosa rugosa*), evening primrose (*Primula laurentiana*), poison ivy (*Toxicodendron radicans*), and beach heather (*Hudsonia tomentosa*). Several subdominant species can also be found on the coastal dune. The salt marsh is primarily herbaceous with a small shrub fringe. Species contained in the herbaceous layer include salt marsh cordgrass (*Spartina alterniflora*), salt meadow cordgrass (*Spartina patens*), and seashore alkali grass (*Puccinellia maritime*). As the salt marsh transitions to upland habitat, species encountered include salt grass (*Distichlis spicata*), salt worts (*Salicornia* spp.), seaside golden-rod (*Solidago sempervirens*), sea lavender (*Limonium nashii*), curly dock (*Rumex crispus*), American bittersweet (*Celastrus scandens*), orchard grass (*Dactylis glomerata*), marsh elder (*Iva frutescens*), quackgrass (*Agropyron pungens*), tartarian honeysuckle (*Lonicera tatarica*), salt-spray rose, and Terrell grass (*Elymus virginicus*). Areas where the majority of erosion is occurring are sparsely vegetated as the rate of erosion does not allow for the establishment of plant species.

3.11.2. Wetlands

The cliffs on the east and north sides of Fourth Cliff are “coastal bank” as defined by Massachusetts regulations (3.10 CMR 10.30(2)), and are bordered by “coastal beach,” which on the east side meets Cape Cod Bay of the Atlantic Ocean and on the north side abuts the confluence of the North and South Rivers, known as the New Inlet. Also, on the north and east sides of the site, beyond the coastal beach, is a rocky, intertidal shore. In addition to being rocky, the waters surrounding Fourth Cliff are shallow. The west side of the Fourth Cliff site is within the Riverfront Area of New Inlet (the confluence of the North and South Rivers).

Executive Order 11990, Protection of Wetlands, requires that each federal agency “shall provide leadership and shall take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands.” Federal, state, and local wetland construction permits are required for any construction within the wetland and coastal zone management areas. The Commonwealth of Massachusetts requirements applicable to actions in the coastal zone, wetlands, and floodplains are managed under the Massachusetts WPA Regulations (310 CMR 10.00). Fourth Cliff includes six resource areas defined in the WPA: Coastal Beach, Coastal Bank, Land Subject to Coastal Storm Flowage, Riverfront Area, Salt Marsh, and 100-Foot Buffer Zone.

Hanscom AFB believes that the proposed work is outside of the buffer zones of the resources areas mentioned above. Hanscom AFB met with the Town of Scituate on 8 August 2014. The Town did not indicate concern that the proposed project is in within a wetland buffer zone, but recommended that Hanscom Air Force Base consult with the North River Commission, also called the North and South Rivers Watershed Association. Consultation is included in section 6.9.



Wetland Buffer Zone GIS Generated by Hansom AFB

3.11.3. Coastal Zone

The federal Coastal Zone Management Act (CZMA) requires that “federal agency activity within or outside the coastal zone that affects land, water use, or natural resources of the coastal zone shall be carried out in a manner consistent with approved state management programs” (16 U.S.C. 1456(c)(1)(A)). The Massachusetts coastal program is implemented through several

agencies within the Executive Office of Energy and Environmental Affairs, with the Massachusetts Office of CZM serving as the lead policy and technical assistance agency. Fourth Cliff is within the designated coastal zone management area.

Hanscom AFB consulted with the Massachusetts Office of Coastal Zone Management (CZM) South Shore Regional Office and consultation is included in Section 6.10.

3.11.4. Wildlife

The salt marsh, coastal dune, and coastal beach provide important habitat for a variety of nesting, migratory, overwintering, and breeding avian species. Avian species that may be found on Fourth Cliff include great blue heron (*Ardea herodias*), great egret (*Ardea alba*), little egret (*Egretta garzetta*), semipalmated plover (*Ereimetus pusillus*), black duck (*Anas rubripes*), and mallard (*Anas platyrhynchos*) among others. In addition to these species, several avian species that are common in developed areas can also be found on Fourth Cliff, including pigeons, doves, starlings, seagulls, and crows.

Fourth Cliff also provides habitat for a variety of shellfish species. Some organisms, such as fiddler crabs (*Uca* sp.), ribbed mussels (*Geukensia demissa*), and blue mussels (*Mytilus edulis*), spend their entire life cycle within the salt marsh. Other shellfish species that can be found on Fourth Cliff include bay scallop (*Argopecten irradians*), oyster (*Crassostrea virginica*), quahog (*Nerccenaria mercenaria*), razor clam (*Ensis directus*), and soft shell clam (*Mya arenaria*) among others. Though Fourth Cliff provides habitat for a variety of shellfish species, it is not suitable to support a substantial shellfishery.

The upland area at Fourth Cliff has been developed and is therefore a disturbed and urbanized area. Though it does provide suitable habitat for a variety of species, much of the area is only

suitable to species that thrive in urban areas. Skunks, raccoons, house cats, foxes, and opossum can all be found on Fourth Cliff.

3.11.5. Threatened or Endangered Species

Fourth Cliff is located within Natural Heritage and Endangered Species Program (NHESP) Priority Habitat and Estimated Habitat (NHESP 2009). Activities that are conducted in NHESP Priority and/or Estimated Habitat will require review by the NHESP.

The coastal dunes on the western side of Fourth Cliff also provide habitat for the state-threatened and federally endangered piping plover (*Charadrius melodus*) and the state-listed species of special concern least tern (*Sternula antillarum*). These are the only two state and/or federally listed species that have been observed on Fourth Cliff.

The piping plover prefers habitat found on the Fourth Cliff outer dune and can be observed from April 1 through August 15. Since 1994, 13 nesting and breeding piping plover pairs have been observed on Fourth Cliff. Of these 13 pairs, only three fledglings have been observed since 1994, though it is not known whether the three-egg nest observed in 2009 survived. Habitat and predation are limiting factors for nesting and breeding piping plover pairs (HAFB 2011a). The least tern can be found at Fourth Cliff from May 5 through August 15 on the beachgrass/beach interface of the coastal dune on the western side of Fourth Cliff. Observers have recorded 149 breeding and nesting least tern pairs since 1994; however, only six fledglings have been observed over that time. Habitat and predation are limiting factors for nesting and breeding least tern pairs (HAFB 2011a).

3.12. Cultural Resources

Originally developed as a summer resort community in the 1920s, Fourth Cliff was annexed by the U.S. Army in 1940 for the development of a waterfront artillery battery. Fourth Cliff was an

important component in the United States' coastal defense system during World War II. The annex contains Battery 208, one of the four 200 series battery structures built in Boston Harbor in anticipation of World War II. For concealment purposes, military facilities were designed to blend in with the existing cottage community. An underground bunker was landscaped, and the fire control tower and station were concealed within false cottages. Many of the houses were removed after World War II. The site was closed down as an active military installation in the 1970s and 1980s and converted into a recreational area annexed to Hanscom Air Force Base. New cottages and recreational facilities were constructed during this time. Currently, all but one of the original cottages, and most of the World War II buildings, have been removed or renovated, with the majority of structures and buildings having been built after 1979.

Section 106 of the National Historic Preservation Act (NHPA), administered by the Advisory Council on Historic Preservation (ACHP), requires that federal agencies take into account the effects of their undertakings on historic properties. Historic properties include prehistoric or historic sites, districts, buildings, structures, objects, or properties of traditional religious or cultural importance listed on or eligible for listing on the National Register of Historic Places (National Register). Section 106 and its implementing regulations require that the Air Force consult with the designated State Historic Preservation Officer (SHPO), identify historic properties within the area of potential effect, and make determinations of National Register eligibility.

In December 1993, an *Inventory of Historic and Archaeological Resources at Fourth Cliff Recreational Annex, Scituate, Massachusetts* was published (Davin et al. 1993). No archaeological resources were identified during the archaeological investigation. The historic-building survey identified 21 buildings and three structures within the site. Construction dates of seven buildings and three structures ranged from ca. 1920 to ca. 1943; 14 buildings dated from 1979 to the present. The report concluded that three (3) buildings, the battery, the fire-control observation tower, and the fire-control observation station are the only World War II era buildings left at the site. The remainder of buildings and structures has been substantially altered

by the removal of original cottages and construction of new cottages, thus lacking adequate integrity for National Register eligibility. The report identified three World War II coastal defense structures (Battery 208, the fire-control tower, and the fire observation station) that meet the criteria of eligibility for inclusion in the National Register.

The Massachusetts Historical Commission (MHC) dictates that the SHPO and the MHC must be consulted and that their concurrence with this action is required. The Wampanoag Tribe of Gay Head (Aquinnah) and the Mashpee Wampanoag Tribe are two federally recognized tribes that consider Hanscom AFB Fourth Cliff Recreational Annex an area of interest. Consultation with the Wampanoag Tribe of Gay Head (Aquinnah) and the Mashpee Wampanoag Tribe is required prior to implementation of the proposed action. The MHC, Massachusetts Commission of Indian Affairs, Wampanoag Tribe of Gay Head (Aquinnah) and the Mashpee Wampanoag Tribe have been consulted and consultation is included in Section 6.

3.13. Environmental Restoration Program / Hazardous Waste

3.13.1. Environmental Restoration Program

Hanscom AFB has historically used, generated, and disposed of numerous hazardous substances, including fuel, aromatic solvents, PCBs, and chlorinated solvents. In 1984, environmental studies identified 13 sites, related to past practices at Hanscom AFB, warranting further investigation and potential cleanup through the Installation Restoration Program (IRP), now called the Environmental Restoration Program (ERP). Subsequent discoveries increased the number of sites to 22. Each site was evaluated using the Air Force Hazard Assessment Rating Methodology (HARM), which evaluates potential receptors, waste characteristics, and migration pathways in order to determine the relative potential of uncontrolled hazardous waste disposal facilities to cause health or environmental damage. HARM scores ranged from 86 (high hazard potential) to 6 (small hazard potential). Of the 22 identified potentially contaminated sites, 8 are still active and are either regulated by the US EPA under CERCLA or by the Commonwealth of Massachusetts. No ERP Site is located near the Fourth Cliff Recreational Annex .

3.13.2. Hazardous Waste

Hazardous waste generated on the base comes from the normal operation and maintenance activities of the 66 ABG organizations, as well as from the research and development operations at the MIT Lincoln Laboratory. Hazardous wastes, including adhesives, sealants, greases, waste paint and thinners, solvents, and corrosive cleaning compounds are accumulated at initial accumulation points (IAPs), and transferred to the 90-day accumulation site, with final disposal off-base. Hanscom AFB has both a Hazardous Materials Operation Plan and a Hazardous Waste Management Plan that targets reducing the purchases of industrial toxic substances, eliminating the purchase of ozone depleting chemicals, and reducing the amount of hazardous waste disposed. No IAPs are present at Fourth Cliff.

Buildings 35 and 37 at the Fourth Cliff Recreational Annex were surveyed by RPF Environmental Inc (RPF) on May 14, 2014. The survey included asbestos-containing building material, lead paint (LP), polychlorinated biphenyls (PCB) light ballasts, mercury switches, PCBs in caulking, and fluorescent light bulbs.

Based on the testing performed by RPF, asbestos was detected in the sink basin undercoating (white in Building 35 and black in Building 37) and black roof flashing in both buildings. RPF conducted limited spot testing of paint and trace concentrations of lead were found in painted surfaces on various interior and exterior building components. Based on the RPF visual observations, no polychlorinated PCB containing light ballasts or fluorescent light bulbs were observed in the building. One mercury containing thermostat was observed in Building 35. No PCBs were detected in any of the caulking samples collected from the buildings. Both buildings have two (2) 100 gallon propane tanks that are used to heat the buildings. Prior to demolition, all asbestos containing materials, LPs, fluorescents bulbs, and propane tanks must be abated, removed and disposed of in accordance with federal, state, local, and Air Force laws and policies.

Section 4. Environmental Consequences

4.1. Land Use

4.1.1. No-Action Alternative

The no-action alternative would continue operations of the Fourth Cliff Recreational Annex in its existing condition. The existing site would not need to be altered and land use would not be impacted during the implementation of the no-action alternative.

4.1.2. Alternative 1 – Preferred Alternative-Renovate Fourth Cliff Recreational Annex

Short-term impacts associated with the renovation of the Fourth Cliff Recreational Annex would include temporary minor disruption of adjacent land uses due to elevated noise levels, increased dust, interference with roadway access, and visual effects. Implementation of the preferred alternative would not change the Land Use of the property overall.

4.2. Socioeconomic Conditions

4.2.1. No-Action Alternative

The no-action alternative would continue operations of the Fourth Cliff Recreational Annex in its existing condition. The no-action alternative would result in no change to the current socioeconomic conditions of Hanscom AFB or Fourth Cliff. Employment at the facility would remain constant, environmental justice populations would not be impacted, and there would be no increase in economic activity in the region.

4.2.2. Alternative 1 - Preferred Alternative-Renovate Fourth Cliff Recreational Annex

Positive short-term employment benefits will accrue to the construction industry during the construction period as a result of the preferred alternative. A short-term increase in the revenue

generated in the surrounding area may also result due to construction employees utilizing local businesses for supplies and personal use. No long-term socioeconomic impact would occur because the preferred alternative would not cause a significant increase or decrease in personnel or users at Fourth Cliff.

Executive Order's 12898 and 13045 mandate that federal agencies identify Environmental Justice issues where disproportionately high and adverse human health or environmental effects on minority and low-income populations, and children may occur. Environmental justice concerns the disproportionate effect of a federal action on low-income or minority populations. The existence of disproportionately high and adverse impacts depends on the nature and magnitude of the effects identified for each of the individual resources. If implementation of the Proposed Action were to have the potential to significantly affect people, those effects would have to be evaluated for how they adversely or disproportionately affect low-income or minority communities. Section 3.2 discusses that only 2.6 percent of Scituate residents are living below the poverty level. The percentage of individuals living beneath the poverty level in the country is 12.4 percent. The low percentage compared to the country's percentage indicates very small minority and low-income populations in the area, thus the proposed action does not have the potential to result in disproportionately high and/or adverse human health or environmental effects on minority populations and low-income populations.

No long-term adverse effects would occur as a result of the Proposed Action so no minority or low-income groups are anticipated to be affected disproportionately.

4.3. Occupational Safety and Health

4.3.1. No-Action Alternative

The no-action alternative would continue operations of the Fourth Cliff Recreational Annex in its existing condition. Implementation of the no-action alternative would result in no direct or indirect impact on the safety and health of Air Force employees or patrons at the site.

4.3.2. Alternative 1 - Preferred Alternative-Renovate Fourth Cliff Recreational Annex

The preferred alternative would implement occupational safety and health procedures to ensure the safety and health of individuals at the worksite. Implementation of the preferred alternative would result in no direct or indirect impact on the safety and health of Air Force employees and others at the site.

4.4. Utilities***4.4.1. Water Supply******4.4.1.1. No-Action Alternative***

The no-action alternative would continue operations of the Fourth Cliff Recreational Annex in its existing condition. Implementation of the no-action alternative would result in no change to the existing site's water supply usage level.

4.4.1.2. Alternative 1 - Preferred Alternative-Renovate Fourth Cliff Recreational Annex

The Fourth Cliff Recreational Annex is provided potable water by the Town of Scituate. In the short-term, construction of the six (8) addition RV sites at Fourth Cliff would require the addition of water lines to be connected to the existing water line. Proper dig permitting procedures must be followed during the construction of new water lines. Also, construction activities may utilize the local water supply for dust control, although this function may alternatively be provided by mobile water tanks filled off-site. The potential use of the local water supply for dust control is not anticipated to have an adverse effect to the water supply at the Fourth Cliff Recreational Annex.

The preferred alternative is not expected to result in a large increase in the demand for water in the long term. The addition of 8 RV sites would be offset by the loss of the 2 cabins and limited use of existing RV sites. No long-term impact to the water supply system at Fourth Cliff is expected. The preferred alternative would not significantly increase the demand for potable water supply at the Fourth Cliff Recreational Annex.

4.4.2. Wastewater

4.4.2.1. No-Action Alternative

The no-action alternative would continue operations for the Fourth Cliff Recreational Annex in its existing condition. Implementation of the no-action alternative would result in no change to the wastewater discharge level of the existing site.

4.4.2.2. Alternative 1 - Preferred Alternative-Renovate Fourth Cliff Recreational Annex

No short-term impacts to wastewater would be anticipated during the proposed construction activities at the Fourth Cliff Recreational Annex. The construction of the eight (8) additional RV sites would require the addition of underground holding “tight” tank and connections to the new RV sites. Proper dig permitting procedures must be followed during the construction of the new tank and connections. Portable toilets may be available for the construction workers, and waste would be transported to an off-site treatment facility.

The preferred alternative will not result a large increase in the volume of wastewater. All wastewater from the new RV sites would be collected in the underground holding “tight” tank. The wastewater will be regularly pumped from the tank and disposed of by contract. It is anticipated that the preferred alternative would not cause a long term impact regarding wastewater at the Fourth Cliff Recreational Annex.

4.4.3. Solid Waste

4.4.3.1. No-Action Alternative

The no-action alternative would continue operations for the Fourth Cliff Recreational Annex in its existing condition. Implementation of the no-action alternative would result in no change to the existing site's solid waste generation rates.

4.4.3.2. Alternative 1 - Preferred Alternative – Renovate Fourth Cliff Recreational Annex

In the short-term, the preferred alternative would generate solid waste, primarily associated with construction materials. Waste material that is not suitable for reuse or recycling would be disposed of appropriately. All solid waste would be handled in accordance with standard Hanscom AFB procedures. All hazardous materials used in the proposed action must be processed through Hanscom AFB's HAZMART Pharmacy. This pollution prevention program prevents or reduces pollution at the source by using less toxic alternatives. Any hazardous materials would be disposed in accordance with state and federal regulations.

The preferred alternative would not increase the solid waste generation because an increase in Fourth Cliff users is not anticipated. Improvements in the base recycling policy and pollution prevention are likely to continue to reduce solid waste and pollution source generation.

4.4.4. Electricity

4.4.4.1. No-Action Alternative

The no-action alternative would continue operations for the Fourth Cliff Recreational Annex in its existing condition. Implementation of the no-action alternative would result in no change to the electricity usage level.

4.4.4.2. *Alternative 1 - Preferred Alternative – Renovate Fourth Cliff Recreational Annex*

The installation must identify and analyses impacts from energy usage and alternative energy sources. All new construction, major renovation, or repair and alteration of Federal Buildings must comply with the *Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings*.

Short-term disruption of power to the immediate area around the site may occur while electrical connections are made to renovate the Fourth Cliff Recreational Annex. The increase in electrical connection to the eight (8) new RV sites would be offset by the decrease in electrical usage in Building 35 and Building 37. The preferred alternative will not have major direct or indirect impacts on the Fourth Cliff Recreation Annex electrical system in the long-term.

4.4.5. *Telecommunications***4.4.5.1. *No-Action Alternative***

The no-action alternative would continue operations for the Fourth Cliff Recreational Annex at its existing condition. Implementation of the no-action alternative would result in no change in telecommunications.

4.4.5.2. *Alternative 1 - Preferred Alternative – Renovate Fourth Cliff Recreational Annex*

No new telephone and communication lines would be supplied to the Fourth Cliff Recreational Annex. No disruption of telephone/communication service in the immediate area is expected. No short-term or long-term impacts would occur.

4.4.6. Propane

4.4.6.1. No-Action Alternative

The no-action alternative would continue operations for the Fourth Cliff Recreational Annex in its existing condition. Implementation of the no-action alternative would result in no change in propane usage at Fourth Cliff.

4.4.6.2. Alternative 1 - Preferred Alternative – Renovate Fourth Cliff Recreational Annex

No impacts are expected to occur in the short-term with regard to propane on Hanscom AFB. The construction and demolition activities will not require the use of propane.

The propane use from the renovated Fourth Cliff Recreational Annex is not anticipated to be significantly greater than the current load. Construction of the eight (8) RV sites would not significantly increase propane use because the two demolished cabins would no longer burn propane. The removal of four (4) 100 gallon tanks would offset the additional RVs that typically only store 20 to 40 lb tanks. The preferred alternative is not anticipated to increase propane usage at Fourth Cliff and it would not have a significant impact on propane usage in the long-term.

4.5. Transportation

4.5.1. No-Action Alternative

The no-action alternative would continue operations for the Fourth Cliff Recreational Annex in its existing condition and would result in no impacts regarding transportation.

4.5.2. Alternative 1 - Preferred Alternative – Renovate Fourth Cliff Recreational Annex

There would be a minimal short-term increase in commercial vehicles on connecting roadways related to renovation of the Fourth Cliff Recreational Annex. Personal and commercial vehicles

operated by the contractor and subcontractors would be on-site or at areas designated by Hanscom AFB. Personal and commercial vehicles operated by contractors or subcontractors are not expected to have an adverse impact on the roadways. The construction contractor would provide Hanscom AFB with a traffic control plan including the approximate duration of the project and affected roads prior to receiving a notice to proceed. These actions would minimize disruption on nearby roadways.

After the completion of the preferred alternative, little change in the amount of commuters at Fourth Cliff would be anticipated. The location of the RV sites is not near most of the existing cabins, so the RVs utilizing the new sites would not significantly affect the traffic conditions. Overall, the preferred action would result in no significant impact to transportation at the Fourth Cliff Recreational Annex.

4.6. Noise

4.6.1. No-Action Alternative

The no-action alternative would continue operations for the Fourth Cliff Recreational Annex in its existing condition. Noise levels at the facility would remain constant and there would be no increase in noise levels in the vicinity of the existing site due to facility construction. Noise levels would not be impacted during implementation of the no-action alternative.

4.6.2. Alternative 1 - Preferred Alternative – Renovate Fourth Cliff Recreational Annex

The construction phase of the preferred alternative will create a temporary increase in noise due to construction activities and equipment. Activities include: excavation, grading, paving, boring, and other associated activities, with equipment such as bulldozers, pavers, graders, generators, cranes, and other noise generating heavy equipment. Temporary noise generation during the construction will be coordinated to reduce or eliminate negative noise impacts to concurrent Fourth Cliff activities.

In the long term, the preferred alternative will not generate significant levels of noise. Long-term operation of the facility would have no impact on noise, as new construction would be consistent with surrounding uses at the Fourth Cliff. The noise generated by vehicles arriving and departing from the Fourth Cliff Recreational Annex is likely to be lost in the background noise associated with the operation of the Fourth Cliff, motor vehicle traffic on local roadways, boats, periodic aircraft flyovers, and natural sounds such as wind, birds, insects, and ocean wave action.

4.7. Air Quality

4.7.1. No-Action Alternative

The no-action alternative would continue operations of the Fourth Cliff Recreational Annex in its existing condition. Air Quality at the existing facility would remain constant as those associated with vehicular traffic and the minimal stationary source emissions from the buildings and RVs. Air quality would not be impacted during implementation of the no-action alternative.

4.7.2. Alternative 1 - Preferred Alternative – Renovate Fourth Cliff Recreational Annex

The preferred alternative may result in short-term localized air quality impacts. All construction vehicles and some equipment would produce emissions that could temporarily affect air quality. The construction activities have the potential to generate fugitive dust. Material loading and transfer (gravel and topsoil), and grading also have the potential to generate fugitive dust. Dust would be controlled onsite by using water to wet down disturbed areas. Moreover, the number of vehicles and the duration of construction required to perform the work is limited. Emissions are therefore not anticipated to cause an adverse impact to regional air quality.

Following the preferred alternative, mobile air emissions sources from automobiles will be unchanged because there will be minimal change in the number of commuters. Some of the

additional RVs will use propane to heat the RVs but the propane usage is not anticipated to significantly increase. There are no anticipated long-term air quality impacts related to the preferred alternative.

A General Conformity – Record of Non-Applicability for the preferred alternative was completed (Section 7). General Conformity under the Clean Air Act, Section 176(c), was evaluated for the preferred alternative according to the requirements of 40 CFR 93, Subpart B. The requirements of this rule are not applicable to the preferred alternative because the total direct and indirect emissions in tons per year (tpy) for the applicable pollutants of concern (i.e., NO_x and VOC) are estimated to be below the conformity threshold values established in 40 CFR 93.153(b).

In addition, the preferred alternative is not considered regionally significant under 40 CFR 93.153(i), as the estimated emissions, using reasonable and conservative assumptions, are significantly less than 10% of the regional emissions. Therefore, a conformity determination is not required.

4.8. *Geology and Soils*

4.8.1. *Geology*

4.8.1.1. *No-Action Alternative*

The no-action alternative would continue operations for the Fourth Cliff Recreational Annex in its existing condition. There would be no geology impacts in the vicinity of the proposed site due to facility construction. Geology would not be impacted during implementation of the no-action alternative.

4.8.1.2. *Alternative 1 - Preferred Alternative – Renovate Fourth Cliff Recreational Annex*

Grading and topography changes may be necessary to design an appropriate drainage system at the site. The preferred alternative's impact to surface topography and geology would be generally minimal because the proposed site has been previously disturbed.

4.8.2. *Soils***4.8.2.1. *No-Action Alternative***

The no-action alternative would continue operations for the Fourth Cliff Recreational Annex in its existing condition. There would be no soil impacts due to facility construction. Soil would not be impacted during implementation of the no-action alternative.

4.8.2.2. *Alternative 1 - Preferred Alternative – Renovate Fourth Cliff Recreational Annex*

The preferred alternative would require the excavation and grading of soils for the demolition of Cabins 35 and 37, and the construction of the eight (8) new RV sites with 10' x 20' concrete pads, a one-way access drive with turning radius for a Type Bus-40, a new gravity septic main, and the addition of utility lines and connections. All activities would follow base best management practices regarding minimizing sedimentation and erosion during storm events. Controls would be left in place until vegetation has become established on disturbed soil minimizing the impacts on soils. Soils would not be significantly impacted during implementation of the preferred alternative, because a majority of the soils were previously disturbed.

4.9. *Surface Water and Groundwater***4.9.1.1. *No-Action Alternative***

The no-action alternative would continue operations for the Fourth Cliff Recreational Annex in its existing condition. There would be no surface water or groundwater impacts due to facility

construction. Neither surface water nor groundwater would be impacted during implementation of the no-action alternative.

4.9.1.2. Alternative 1 - Preferred Alternative – Renovate Fourth Cliff Recreational Annex

The preferred alternative does not appear to be within the buffer zone of perennial streams and would likely not need formal coordination with the Scituate Conservation Commission. Hanscom AFB met with the Town of Scituate on 5 August 2014 (Section 6.1). Consultation with the North River Commission, also called North and South Rivers Watershed Association (NSRWA), was recommended by the Town of Scituate. Hanscom AFB began consultation with the NSRWA and no response indicates the project is not within surface water or wetland buffer zones (Section 6.9).

The demolition of the two (2) cabins would result in a decrease in impervious surface at the site. This would result in a decrease in stormwater runoff. Positive drainage away from the new RV sites would be incorporated into design and construction. Hanscom AFB dig permitting procedures would include proper sediment management controls to eliminate short-term impacts to surface waters during construction. Therefore, it is anticipated that the implementation of the preferred alternative would result in a no short-term or long-term impacts to surface water at the Fourth Cliff Recreational Annex.

It is not anticipated that subsurface excavations of the preferred alternative would encounter groundwater. If groundwater were to be encountered then the construction contractor will be required to include provisions for dewatering. Treatment to reduce suspended solids will be required prior to discharge of construction dewatering. The demolition of Building 35 and Building 37 would result in a decrease in impervious surface and an increase in ground water recharge. The preferred alternative, in addition, must be designed to result in a net decrease in runoff that also results in an increase in detention and/or groundwater recharge. This would

result in a positive impact to surface water and groundwater at the Fourth Cliff Recreational Annex.

4.10. Floodplains

4.10.1. No-Action Alternative

There are no floodplain issues if the no-action alternative was taken.

4.10.2. Alternative 1 - Preferred Alternative – Renovate Fourth Cliff Recreational Annex

Given that FEMA has classified the preferred alternative as not within a floodplain, renovation of the Fourth Cliff Recreational Annex would have no impacts on floodplains.

4.11. Biological Resources

4.11.1. Vegetation

4.11.1.1. No-Action Alternative

The no-action alternative would continue operations for the Fourth Cliff Recreational Annex in its existing condition. There would be no modification to the site, so vegetation would not be impacted during implementation of the no-action alternative.

4.11.1.2. Alternative 1 - Preferred Alternative – Renovate Fourth Cliff Recreational Annex

The existing Fourth Cliff Recreational Annex site has landscaped grass and no shrubs or trees. The short-term loss of any vegetation is not anticipated to substantially impact the biological community on, or in the vicinity of, the preferred alternative site. Once the preferred alternative is completed, the replacement of grass would occur.

4.11.2. Wetlands

4.11.2.1. No-Action Alternative

The no-action alternative would continue operations for the Fourth Cliff Recreational Annex without changing the existing facility. The existing site has a wetland resource area northwest of the property; however, there would be no modification to the existing site, so wetlands would not be impacted during implementation of the no-action alternative.

4.11.2.2. Alternative 1 - Preferred Alternative – Renovate Fourth Cliff Recreational Annex

The preferred alternative does not appear to be within the buffer zone of a wetland resource area and the action would likely not need formal coordination with the Scituate Conservation Commission. Hanscom AFB met with the Town of Scituate on 5 August 2014 (Section 6.1). Consultation with the North River Commission, also called North and South Rivers Watershed Association (NSRWA), was recommended by the Town of Scituate. Hanscom AFB began consultation with the NSRWA and no response indicates the project is not within surface water or wetland buffer zones (Section 6.9). The preferred alternative would not result in any short-term or long-term wetlands impacts.

4.11.3. Coastal Zone

4.11.3.1. No-Action Alternative

The no-action alternative would continue operations for the Fourth Cliff Recreational Annex in its existing condition. There would be no modification to the building or surrounding area at the existing site, so Coastal Zones would not be impacted during implementation of the no-action alternative.

4.11.3.2. Alternative 1 - Preferred Alternative – Renovate Fourth Cliff Recreational Annex

The preferred alternative would not impact costal zones in the area. Hanscom AFB consulted with the Massachusetts Office of Coastal Zone Management (CZM) South Shore Regional Office and no response indicates concurrence with the proposed action. Consultation is included in Section 6.10.

4.11.4. Wildlife***4.11.4.1. No-Action Alternative***

The no-action alternative would continue operations for the Fourth Cliff Recreational Annex in its existing condition. There would be no modification to the building or surrounding area at the existing site, so wildlife would not be impacted during implementation of the no-action alternative.

4.11.4.2. Alternative 1 - Preferred Alternative – Renovate Fourth Cliff Recreational Annex

The preferred alternative would not impact wildlife in the area because the proposed site consists of the existing Fourth Cliff Recreational Annex pavement and mowed lawn, which does not provide a significant habitat for wildlife in its managed condition. The addition of eight (8) new sites and utility lines/connections would occur on land that has already been disturbed. The implementation of this alternative would have no short-term or long-term impact to wildlife or wildlife habitat.

4.11.5. Threatened or Endangered Species***4.11.5.1. No-Action Alternative***

The no-action alternative would continue operations for the Fourth Cliff Recreational Annex in its existing condition. The no-action alternative would not impact threatened or endangered species at Fourth Cliff.

4.11.5.2. Alternative 1 - Preferred Alternative – Renovate Fourth Cliff Recreational Annex

The coastal dunes on the western side of Fourth Cliff also provide habitat for the state-threatened and federally endangered piping plover (*Charadrius melodus*) and the state-listed species of special concern least tern (*Sternula antillarum*). These are the only two state and/or federally listed species that have been observed on Fourth Cliff.

The Hanscom AFB Environmental Office consulted with U.S. Fish and Wildlife Service (USFW) and the Massachusetts National Heritage/Endangered Species Program in a letter dated 1 August 2014 (Appendix 6.8 and 6.9). The letter explained that the proposed project was not near the habitats of the piping plover or least tern. USFW responded in a letter dated 1 August 2014 (Appendix 6.8) concurring that the project would not impact threatened or endangered species. No response was received from Massachusetts National Heritage/Endangered Species Program indicates concurrence with Hanscom AFB's determination.

The protected areas are not near the site of the proposed action. The contractor should be made aware of any restricted areas related to the piping plover or least tern. Hanscom AFB currently informs patrons of the protected birds and restricted areas through educational displays, proper signage, and restricted access to habitat areas. The proposed action would not impact threatened or endangered species in the short-term or long-term because of Hanscom AFB's continued support.

4.12. Cultural Resources**4.12.1. No-Action Alternative**

The no-action alternative would continue operations for the Fourth Cliff Recreational Annex in its existing condition. Implementation of the no-action alternative would not impact cultural resources.

4.12.2. Alternative 1 - Preferred Alternative – Renovate Fourth Cliff Recreational Annex

Hanscom AFB Environmental Section sent a letter to the Massachusetts's Historical Commission (MHC) on 8 July 2014. MHC concurred on 5 August 2014 that the proposed action does not have an adverse effect on significant historical or archeological assets of the Commonwealth (Section 6.5). A similar letter was sent to the Situate Conservation Commission on 8 July 2014. No response was received after 30 days from the receipt of the letter indicates concurrence with Hanscom AFB's determination (Section 6.6). Consultation with the State Historic Preservation Officer (SHPO) and the Situate Conservation Commission has been completed.

On 17 March 2014, the Hanscom AFB Commander of the 66th Air Base Group initiated consultation with the Wampanoag Tribe of Gay Head (Aquinnah) in a letter addressed to the Tribal Council Chairman. On 1 July 2014, the Hanscom AFB Environmental Section sent a letter to the Massachusetts Commission of Indian Affairs, the Wampanoag Tribe of Gay Head (Aquinnah) and the Mashpee Wampanoag Tribe to inform them of the proposed action. The Tribal Historical Preservation Department of the Mashpee Wampanoag Tribe responded in a letter dated 4 August 2014, indicating that the project has the potential to have "adverse effects" to historic or cultural resources important to the tribe and requested additional information in order to review the project property. On 18 August 2014, the Hanscom AFB Environmental Office spoke with the Mashpee Wampanoag Tribe (MWT) and provided additional information for their review. Past archeological surveys and previous disturbance of the site indicated that it is highly unlikely that archeological artifacts would be discovered if the preferred alternative was implemented. A 1993 archeological survey of the site was sent to the MWT for their review. A letter dated 5 September 2014 indicates that Hanscom AFB has completed the MWT section 106 review process but if artifacts are discovered during the work then work must cease and the MWT must be contacted (See section 6.3) As stated in the letter: "The MWT considers this project in compliance with the MWT's section 106 review process with agreed upon mitigations." The agreed upon mitigations were stated in the initial letter from Hanscom AFB to

the Mashpee Wampanoag Tribe: “If any artifacts, burial remains or funerary objects are discovered at any time during the proposed action, the Air Force will immediately cease activity and contact you [the MWT] in regards to the disposition of any such artifact, remains, or objects.” The letter stating compliance with the MWT’s section 106 review process was signed and dated the Tribal Historic Preservation Officer (THPO). No response from the Wampanoag Tribe of Gay Head (Aquinnah) after 30 days from the receipt of the letter also indicates concurrence with the proposed action.

Implementation of the no-action alternative would not result in short-term or long-term impacts to cultural resources at Hanscom AFB or the Fourth Cliff Recreational Annex. Consultation required prior to the start of work has been completed.

4.13. Environmental Restoration Program / Hazardous Waste

4.13.1. Environmental Restoration Program

4.13.1.1. No-Action Alternative

The no-action alternative would continue operations for the Fourth Cliff Recreational Annex in its existing conditions. The no-action alternative would not directly impact nor impede monitoring of any active ERP sites.

4.13.1.2. Alternative 1 - Preferred Alternative – Renovate Fourth Cliff Recreational Annex

The preferred alternative would not directly impact nor impede monitoring of any active ERP sites on Hanscom AFB because there are no sites located at the Fourth Cliff Recreational Annex.

4.13.2. Hazardous Waste

4.13.2.1. No-Action Alternative

The no-action alternative would continue operations for the Fourth Cliff Recreational Annex in its existing condition and would not impact hazardous waste on Hanscom AFB.

4.13.2.2. Alternative 1 - Preferred Alternative – Renovate Fourth Cliff Recreational Annex

The preferred alternative is not located in the vicinity or down gradient from any known hazardous waste sites. During construction, hazardous materials and waste would likely be used and generated, including: equipment fuel, engine oil, hydraulic oil, grease, and other equipment operation and maintenance material. Any hazardous materials used during construction would be used, stored, transported, and disposed in accordance with base, military, state, and federal regulations.

Based on the survey findings, the building was found to contain Asbestos Containing Building Materials (ACBM) in the form of two different types of sink basin undercoating, and roof flashing materials on each building. Proper abatement and/or management of the materials will be required in accordance with applicable State and federal regulations. Renovation and demolition plans should be reviewed by a certified industrial hygienist and a licensed project designer for possible asbestos impact issues. Based on the impact assessment and planned usage, technical specifications should be prepared for abatement, as applicable (RPF 2013).

Asbestos removal is highly regulated at the State and federal level. Notification to MA Department of Environmental Protection is required 10-days prior to the start of interior abatement work and demolition. Only qualified, trained, and licensed firms, as applicable, should be engaged to complete asbestos removal or other abatement activity. Asbestos abatement work must be designed (abatement specifications or work plan prepared) by accredited personnel.

In addition, paint containing trace concentrations of lead was found in each building. As lead was found to be present in the screening, proper waste testing with TCLP extraction for lead and potentially other toxic materials should also be completed prior to disposal of any waste generated in accordance with current EPA requirements. Often times it is recommended that pre-demolition TCLP testing be completed such that waste can be segregated as required during demolition activity. Construction/demolition waste that is found to contain lead greater or equal to 5.0 milligrams per liter (mg/L) by TCLP analysis must be handled and treated as hazardous waste. Work impacting LP and mercury must be performed in accordance with current State and federal standards, including but not limited safe work practices, engineering controls, proper waste packaging, and proper disposal. Work involving LP may require notification of tenants, if rented or leased space, prior to start of work. Sufficiently in advance of the start of renovation and/or remediation work, abatement project design should be completed (RPF 2013).

No PCB or assumed PCB ballasts were observed by RPF within either of the buildings. During demolition of the lights, additional inspections should be performed for the presence of any light fixtures that may contain either PCB containing ballasts of mercury containing fluorescent light bulbs. PCB and non-PCB ballasts should be segregated and packaged for waste disposal in accordance with State and federal requirements. There is a substantial cost difference for disposal of PCB ballasts versus non-PCB ballasts. Based on the spot checks performed by RPF, one mercury switch/thermostat was observed in Building 35 and no suspected mercury switches/thermostats were observed in Building 37(RPF 2013).

Hanscom AFB prohibits the use of all Class I ozone-depleting chemicals, and directs organizations to minimize the use of Class II ozone-depleting chemicals and toxic substances. Consequently, hazardous waste generation is anticipated to be reduced to the maximum extent. Any construction debris will be segregated from hazardous materials requiring special disposal in accordance with federal and state regulation, as well as Hanscom AFB policies. No adverse

impacts resulting from construction are anticipated. Overall, the following of all local, state, and federal regulations would result in no short-term or long-term adverse impacts in regards to hazardous wastes on Hanscom AFB or the Fourth Cliff Recreational Annex.

4.14. Cumulative Impacts

This section provides a definition of cumulative impacts, a description of past, present, and reasonably foreseeable actions relevant to cumulative impacts, and an evaluation of cumulative impacts potentially resulting from these interactions.

Cumulative impacts on environmental resources result from incremental impacts of a proposed action when combined with other past, present, and reasonably foreseeable future projects in the area. Cumulative impacts can result from minor, but collectively substantial, actions undertaken over a period of time by various agencies (federal, state, and local) or individuals.

In accordance with NEPA, a discussion of cumulative impacts resulting from projects that are proposed, under construction, recently completed, or anticipated to be implemented in the near future is required. Recent CEQ guidance on Considering Cumulative Impacts affirms this requirement, stating that the first steps in assessing cumulative impacts involve defining the scope of the other actions and their interrelationships with the Proposed Action. The scope of the cumulative impact analysis involves both the geographic extent of the impacts and the time frame in which the impacts could be expected to occur. For this EA, the Region of Influence (ROI) includes the Fourth Cliff Recreational Annex. Actions that do not occur within or adjacent to the ROI have not been considered in the cumulative impact analysis.

4.14.1. Past, Present, and Reasonably Foreseeable Actions

Other than routine maintenance and repairs of the buildings and grounds, no other projects of significance are ongoing at Fourth Cliff to have taken place in the recent past. Proposed in the near future is the Fourth Cliff Shoreline Stabilization Project.

Currently, the exposed east and north faces of Fourth Cliff are experiencing significant erosion. The primary cause of erosion of the coast banks is from rainwater runoff and wave run-up from significant storm events (i.e., storms with a return frequency in excess of 5 to 10 years). Groundwater seepage may also play a minor role in the erosion of the bank. Between 1958 and 2000, approximately 40 feet of cliff face has eroded, representing an average annual erosion of about 1,500 cubic yards, or 1 foot per year. Ongoing erosion is damaging the existing roadway, parking area, camping area, picnic area, stairway, and fencing. Continued erosion threatens safety and the stability of the historic structure from the edge of the cliff. The proposed shoreline stabilization project is needed to protect and preserve the Air Force's property and the safety of workers and patrons at the Fourth Cliff Recreational Annex.

The Air Force commissioned a study by Ocean and Coastal Consultants (OCC) to determine the source of erosion at Fourth Cliff and to evaluate potential alternatives to address the erosion. Based on the relevant technical data and regulations gathered and reviewed during the study, the OCC study (OCC 2001) made several conclusions, including:

1. The primary causes of erosion of the coastal bank at Fourth Cliff are rainwater runoff and wave run-up from significant storm events.
2. Further erosion of the coastal bank at Fourth Cliff can be prevented without adversely affecting adjacent, residential properties.
3. Fourth Cliff is not a significant source of sediment to adjacent coastal beaches.
4. Net sediment transport at Fourth Cliff is to the north.
5. Only a "hard" coastal structure will protect Fourth Cliff from storms with a return frequency of 100 years. A combination of "soft" and "hard" erosion control measures offers the best protection against coastal bank erosion from rainwater runoff and significant storm wave runup.

The Air Force has four primary goals for the Fourth Cliff Shoreline Stabilization Project:

1. Increase safety for personnel and patrons at the site.
2. Provide protection of the exposed cliff face from rainwater runoff.
3. Provide shoreline protection for the 100-year storm event. Protection for the 100-year storm event will justify the initial capital cost of the project and provide an appropriate level of protection for the structures eligible for inclusion on the National Register of Historic Places; and
4. Minimize ongoing maintenance costs.

The cumulative impact of this action when compared with the preferred alternative would be positive long-term impacts to safety and cultural resources and the Fourth Cliff Recreational Annex. The enhanced protection of the cliff would increase the safety for employees and patrons at the site. The enforced cliff would also secure historic structures and eliminate the threat of damage or loss of cultural resources due to extremer rain water run-off and coastal storm events. In the short-term for both projects, air quality would be degraded temporarily during construction of the both due to emissions from heavy equipment, increased vehicle traffic during delivery of equipment and materials, and dust associated with earth-moving activities. Enforcement of common construction practices during the construction period would minimize impacts on air quality. Policies regarding truck trips, idling, and size and type of earth moving equipment would be established to minimize the temporary degradation of air quality. In addition, construction vehicle operation and the movement of materials would generate noise at the construction site and along traffic corridors to Fourth Cliff. However, these impacts would be short in duration and would not be expected to cause undue annoyance.

Section 5. Measures To Reduce Potential For Impact

While some impacts to the natural and human environment may occur during construction of the preferred alternative and/or daily operations within the renovated Fourth Cliff Recreational Annex, these impacts are minor and are not atypical compared with other routine construction projects. Commonly applied Best Management Practices and other measures identified below further reduce the likelihood that these activities would have a significant impact on the environment.

Parameter:	BMP or Other Measures to Reduce Impact:
Land Use	A phased construction schedule will be implemented to reduce peak traffic/noise levels and thus minimize disruption to nearby land uses.
Occupational Safety and Health	The contractor must submit a site specific safety plan (SSSP) for acceptance by the Government prior to start of work at the job site. Work cannot proceed until the SSSP has been accepted by a HAFB Government Representative.
Utilities	Existing utility alignments will be identified through markings (similar to "Dig Safe") prior to any excavation to prevent damage to existing infrastructure. Hanscom AFB dig permitting procedures must be followed.
Solid Waste	Solid waste management would be in compliance with Hanscom AFB recycling policies to minimize the amount of solid waste disposed without beneficial reuse during demolition, construction, and operation of new facility. The amount of Construction & Demotion (C&D) Debris disposed/recycled in relation to the proposed work also must be provided to the Environmental Office. At a minimum the quantity (CY or Tons) of C&D debris and the address of disposal site must be provided. Reporting this information will help Hanscom AFB demonstrate compliance with state waste ban compliance and Air Force recycling goals.
Transportation	Transportation of heavy trucks would only be allowed during normal business hours to avoid the disturbance of surrounding residential areas. The contractor must submit traffic control plan including the approximate duration of the project and affected roads prior to receiving a notice to proceed from Hanscom AFB.
Noise	Mufflers would be used on construction equipment and vehicles to minimize noise impact.
Air Quality	All equipment and vehicles used during construction would be maintained in good operating condition so that exhaust emissions are minimized. Dust will be controlled on-site by using water to wet down disturbed areas, implementing proper sediment controls, and quickly re-vegetating disturbed soil to minimize impacts.

Parameter:	BMP or Other Measure to Reduce Impact:
Soil	Controls would be left in place until vegetation has become established on disturbed soil near the Fourth Cliff , minimizing the impacts on soils.
Surface Water	Consultation with the North and South Rivers Watershed Association to confirm that the preferred alternative does not fall within a 200-foot Riverfront area.
Groundwater	If dewatering is necessary during construction, the water will be treated for total suspended solids (TSS) removal prior to discharge to receiving water. Upon completion, the facility's stormwater management system will retain stormwater allowing for a greater rate of infiltration to groundwater.
Threatened or Endangered Species	The coastal dunes on the western side of Fourth Cliff also provide habitat for the state-threatened and federally endangered piping plover (<i>Charadrius melodus</i>) and the state-listed species of special concern least tern (<i>Sternula antillarum</i>). The contractor should be made aware of any restricted areas related to the piping plover and least tern. Hanscom AFB currently informs patrons of the protected birds and restricted areas through educational displays, proper signage, and restricted access to habitat areas.
Wetlands	No wetland resource area will be impacted by the proposed action.
Hazardous Waste	<p>All hazardous materials used or encountered during construction, demolition, or operation would be handled and disposed in accordance with Hanscom AFB policies and protocols and all applicable state and federal regulations. The disposal of any hazardous/state regulated wastes generated must be coordinated with the environmental office.</p> <p>Any asbestos abatement must also be coordinated with the Hanscom AFB Environmental Office. Asbestos abatement can only be done by a licensed asbestos contractor. Additionally, full containment and a licensed project monitor may be required. The asbestos contractor must comply with all state and federal regulations.</p>
Hazardous Materials	All Hazardous Materials used in the proposed action must be processed through Hanscom AFB's HAZMART Pharmacy. This pollution prevention program prevents or reduces pollution at the source by using less toxic alternatives.
Energy and Sustainability	The installation must identify and analyze impacts from energy usage and alternative energy sources. All new construction, major renovation, or repair and alteration of Federal Buildings must comply with the <i>Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings</i> .

Section 6. Consultation and Public Notice

6.1. Town of Scituate Consultation

Sign in Sheet 8/5/14

4th Cliff Proposed RV parking slots

Nancy Durfee Coastal Resource Officer ndurfee@scituate.ma.gov

Patricia Vinchesi Town Administrator pvinchesi@scituate.ma.gov

Laura Harbottle Town Planner lharbottle@scituate.ma.gov

Jennifer Keefe Health Department jkeefe@scituate.ma.gov

Neil Duggan Building Commissioner nduggan@scituate.ma.gov

Robert Vogel Local Building Inspector rvogel@scituate.ma.gov

CHUCK STRICKLAND Intuition Home Care charles.strickland@us.af.mil

Jim Maravelias Environmental Engineering james.maravelias@us.af.mil

Raymond Ralls Civil Engineering Raymond.RALLS@USAF.mil

PAT GALLIVAN CONSERVATION PGALLIVAN@Scituate.ma.gov

KEVIN CAFFERTY DPW KCAFFERTY@Scituate.ma.gov

6.2. Mass Commission of Indian Affairs Consultation**DEPARTMENT OF THE AIR FORCE**
HEADQUARTERS 66TH AIR BASE GROUP
HANSCOM AIR FORCE BASE MASSACHUSETTS

Mr. Charles N. Strickland III, PE
66 ABG/CEIE
120 Grenier Street
Hanscom AFB MA 01731-1910

01 JUL 2014

Mr. Jim Peters
Director of the Massachusetts Commission on Indian Affairs
100 Cambridge Street, Suite 300
Boston, MA 02114

Dear Mr. Peters

I would like to inform the Massachusetts Commission on Indian Affairs that Hanscom Air Force Base (AFB) is proposing to demolish two (2) cabins and construct eight (8) Recreational Vehicle (RV) sites at its Fourth Cliff Recreational Annex in Scituate, MA. The cabins are in major despair and cannot be used. The new RV sites would better meet the needs of patrons that use the Fourth Cliff Recreational Annex. The proposed sites would include water, sewer and electrical service, and the sites would be constructed in compliance with all federal, state, local codes.

If this action were to occur, no significant impact associated with land use, socioeconomics, cultural resources, occupational safety & health, water supply, wastewater, solid waste, transportation, noise, air quality, geology/soils, surface water/groundwater, floodplains, biological resource, hazardous waste, or the environmental restoration program would be anticipated. An Environmental Assessment (EA) is being prepared to validate no significant impacts and is expected to be published later in 2014.

The proposed area was previously disturbed during the construction of the cabins and roadways that provide access to the cabins. If any artifacts, burial remains or funerary objects are discovered at any time during the proposed action, the Air Force will immediately cease activity and contact you in regards to the disposition of any such artifacts, remains or objects.

I respectfully request your review, comments and concurrence on the proposed action. Please provide comments no later than 30 days from receipt of this letter. A non-response will be considered as concurrence. Please provide any response to me at 781-225-2969 or at charles.strickland.4@us.af.mil.

Very Respectfully

A handwritten signature in black ink, appearing to read "C. Strickland III", is written over a horizontal line.

CHARLES N. STRICKLAND III, P.E.
Chief, Environmental Section

- 2 Attachments:
1. Location Map
2. 15 % Design Drawing

Location Map

15% Design Drawing



6.3. Mashpee Wampanoag Tribe Consultation



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 66TH AIR BASE GROUP
HANSCOM AIR FORCE BASE MASSACHUSETTS

Mr. Charles N. Strickland III, PE
66 ABG/CEIE
120 Grenier Street
Hanscom AFB MA 01731-1910

01 JUL 2014

Mr. Cedric Cromwell
Tribal Council - Chairman
Mashpee Wampanoag Tribe
483 Great Neck Road
Mashpee, MA 02649

Dear Mr. Cromwell

I would like to inform the Mashpee Wampanoag Tribe that Hanscom Air Force Base (AFB) is proposing to demolish two (2) cabins and construct eight (8) Recreational Vehicle (RV) sites at its Fourth Cliff Recreational Annex in Scituate, MA. The cabins are in major despair and cannot be used. The new RV sites would better meet the needs of patrons that use the Fourth Cliff Recreational Annex. The proposed sites would include water, sewer and electrical service, and the sites would be constructed in compliance with all federal, state, local codes.

If this action were to occur, no significant impact associated with land use, socioeconomics, cultural resources, occupational safety & health, water supply, wastewater, solid waste, transportation, noise, air quality, geology/soils, surface water/groundwater, floodplains, biological resource, hazardous waste, or the environmental restoration program would be anticipated. An Environmental Assessment (EA) is being prepared to validate no significant impacts and is expected to be published later in 2014.

The proposed area was previously disturbed during the construction of the cabins and roadways that provide access to the cabins. If any artifacts, burial remains or funerary objects are discovered at any time during the proposed action, the Air Force will immediately cease activity and contact you in regards to the disposition of any such artifacts, remains or objects.

I respectfully request your review, comments and concurrence on the proposed action. Please provide comments no later than 30 days from receipt of this letter. A non-response will be considered as concurrence. Please provide any response to me at 781-225-2969 or at charles.strickland.4@us.af.mil.

Very Respectfully

A handwritten signature in black ink, appearing to read "C. Strickland III", is written over a horizontal line.

CHARLES N. STRICKLAND III, P.E.
Chief, Environmental Section

- 2 Attachments:
1. Location Map
2. 15 % Design Drawing

Location Map



15% Design Drawing





**Mashpee Wampanoag Tribe
Section 106 Review
Consultation Response Form**

Project Docket Number:	Hanscom A.F.B.- Demo/Reconstruction Project
Consultant/Environmental Firm:	Department of the Air Force
Address or Location Description:	348 Central Ave,
City, State:	Scituate, MA
Point of Contact	Mr. Charles Strickland III, P.E.

Response:

- ☐ We have no concerns related to the proposed project. MWT anticipates no adverse affects to our sites of cultural significance, by you or your client.
- ☐ The MWT considers this project in compliance with the MWT's section 106 review process with agreed upon mitigations.
- ☐ This site will require the on-site presence of a Tribal Cultural Resource Monitor during ground disturbing activities. Contact the Compliance Review Supervisor with construction schedule.
- ☒ This project has the potential to have "adverse effects" to historic or cultural resources important to our tribe. We recommend the following actions:

We will need additional information and contract documents as they develop in order to review this project properly. The area is known to have documented Native American habitation within close proximity to the area. This consultation process initiates compliance to the National Historic Preservation Act of 1966 and all relevant amendments including but not limited to section 106 and 36 CFR 800.

Exception: In the case that archeological resources or human remains are found during construction, you must immediately stop construction and notify us.


Ramona Peters, Compliance Review Supervisor
Tribal Historic Preservation Department

Aug 4, 2014
Date

Mashpee Wampanoag Indian Tribal Council
483 Great Neck Rd South
Mashpee, MA 02649
Phone: 508-477-0208 or 855-668-7423
Email: 106review@mwtribe.com

MARAVELIAS, JAMES P CTR USAF AFMC 66 ABG/CEKV

From: Ramona Peters <RPeters@mwtribe.com>
Sent: Monday, August 18, 2014 4:50 PM
To: MARAVELIAS, JAMES P CTR USAF AFMC 66 ABG/CEKV
Cc: STRICKLAND, CHARLES N III GS-14 USAF AFMC 66 ABG/CE
Subject: RE: Hanscom AFB Proposed Demo/Construction Fourth Cliff, Situate, MA

Thank you Jim,

I've received both documents for review. We will be in touch.

In Thanksgiving, Ramona

CONFIDENTIALITY NOTE: The information contained in this transmission may be privileged and confidential information, and is intended only for the use of the individual or entity named above. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this transmission in error, please immediately reply to the sender that you have received this communication in error and then delete it. Thank you.

-----Original Message-----

From: MARAVELIAS, JAMES P CTR USAF AFMC 66 ABG/CEKV [mailto:james.maravelias.ctr@us.af.mil]
Sent: Monday, August 18, 2014 4:42 PM
To: Ramona Peters
Cc: STRICKLAND, CHARLES N III GS-14 USAF AFMC 66 ABG/CE
Subject: Hanscom AFB Proposed Demo/Construction Fourth Cliff, Situate, MA

Hi Ramona,

It was nice talking to you earlier today. Attached is a map that better defines the area of the proposed work. Also includes Hanscom AFB's consultation with the Massachusetts Historical Commission. I will continue to look in our records and provide you copies of any past archeological studies of the site. Let me know what else I can provide you for your review.

Please reply so I know that you received this email.

Thank you for your review.

Sincerely,

Jim Maravelias

Jim Maravelias
66 ABG/CEIE
Portage, Inc.
72 Dow Street, Building 1825
Hanscom AFB, MA 01731
T 781 225 6151 F 781 225 2465

The information contained in this e-mail may be confidential and is intended solely for the use of the named addressee.

MARAVELIAS, JAMES P CTR USAF AFMC 66 ABG/CEKV

From: MARAVELIAS, JAMES P CTR USAF AFMC 66 ABG/CEKV
Sent: Wednesday, September 03, 2014 9:31 AM
To: rpeters@mwtribe.com
Cc: STRICKLAND, CHARLES N III GS-14 USAF AFMC 66 ABG/CE
Subject: Renovate Hanscom AFB Fourth Cliff Scituate, MA site

Hi Ramona,

As I mentioned on the phone, you should receive an email from AMRDEC SAFE with a link to download the 1993 Archeological Report for the Hanscom AFB Fourth Cliff Scituate, MA site. Please provide me a confirmatory email once you have received the email and completed downloading the files.

I hope that the report will enable you to conclude that the project does not have the potential to have "adverse effects" to historic or cultural resources to the Mashpee Wampanoag Tribe (MWT). If after review, the MWT still believes that there is potential for "adverse effects" then please provide recommendations to include in the project to eliminate such potential.

Let me know if you have any questions. Please provide a response including concurrence or any recommendations at your earliest convenience. Responses on or before 9/16/2014 are appreciated.

Thank you,

Jim Maravelias

Jim Maravelias
66 ABG/CEIE
Portage, Inc.
72 Dow Street, Building 1825
Hanscom AFB, MA 01731
T 781 225 6151 F 781 225 2465

The information contained in this e-mail may be confidential and is intended solely for the use of the named addressee. Access, copying or re-use of the e-mail or any information contained therein by any other person is not authorized. If you are not the intended recipient please notify us immediately by returning the e-mail to the originator.

MARAVELIAS, JAMES P CTR USAF AFMC 66 ABG/CEKV

From: Ramona Peters <RPeters@mwtribe.com>
Sent: Wednesday, September 03, 2014 10:14 AM
To: MARAVELIAS, JAMES P CTR USAF AFMC 66 ABG/CEKV
Subject: received and downloaded PAL reports

Good Morning Jim,

We are reviewing the downloaded documents and plan to make a determination today. My Deputy will scan the 106 Review form and email it to you to help expedite the process.

In Thanksgiving, Ramona

Ramona Peters

Mashpee Wampanoag Tribe

Tribal Historic Preservation Officer

483 Great Neck Rd. South

Mashpee, MA 02649

(508) 477-0208 X 101

(774)327-0182



**Mashpee Wampanoag Tribe
Section 106 Review
Consultation Response Form**

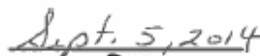
Project Docket Number:	Hanscom A.F.B.- Demo/Reconstruction Project
Consultant/Environmental Firm:	Department of the Air Force
Address or Location Description:	348 Central Ave,
City, State:	Scituate, MA
Point of Contact	Mr. Charles Strickland III, P.E.

Response:

- ☐ We have no concerns related to the proposed project. MWT anticipates no adverse affects to our sites of cultural significance, by you or your client.
- ☒ The MWT considers this project in compliance with the MWT's section 106 review process with agreed upon mitigations.
- ☐ This site will require the on-site presence of a Tribal Cultural Resource Monitor during ground disturbing activities. Contact the Compliance Review Supervisor with construction schedule.
- ☐ This project has the potential to have "adverse effects" to historic or cultural resources important to our tribe. We recommend the following actions:

Exception: In the case that archeological resources or human remains are found during construction, you must immediately stop construction and notify us.


Ramona Peters, Compliance Review Supervisor
Tribal Historic Preservation Department


Date

Mashpee Wampanoag Indian Tribal Council
483 Great Neck Rd South
Mashpee, MA 02649
Phone: 508-477-0208 or 855-668-7423
Email: 106review@mwtribe.com

6.4. Wampanoag Tribe of Gay Head (Aquinnah) Consultation

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 66TH AIR BASE GROUP
HANSCOM AIR FORCE BASE MASSACHUSETTS

Mr. Charles N. Strickland III, PE
66 ABG/CEIE
120 Grenier Street
Hanscom AFB MA 01731-1910

01 JUN 2014

Mr. Tobias Vanderhoop
Tribal Council - Chairman
Wampanoag Tribe of Gay Head (Aquinnah)
20 Black Brook Road
Aquinnah MA 02535-9701

Mr. Vanderhoop

I would like to inform the Wampanoag Tribe of Gay Head (Aquinnah) that Hanscom Air Force Base (AFB) is proposing to demolish two (2) cabins and construct eight (8) Recreational Vehicle (RV) sites at its Fourth Cliff Recreational Annex in Scituate, MA. The cabins are in major despair and cannot be used. The new RV sites would better meet the needs of patrons that use the Fourth Cliff Recreational Annex. The proposed sites would include water, sewer and electrical service, and in compliance with all federal, state, local codes.

If this action were to occur, no significant impact associated with land use, socioeconomics, cultural resources, occupational safety & health, water supply, wastewater, solid waste, transportation, noise, air quality, geology/soils, surface water/groundwater, floodplains, biological resource, hazardous waste, or the environmental restoration program would be anticipated. An Environmental Assessment (EA) is being prepared to validate no significant impacts and is expected to be published later in 2014.

The proposed area was previously disturbed during the construction of cabins and roadways that provide access to the cabins. If any artifacts, burial remains or funerary objects are discovered at any time during the proposed action, the Air Force will immediately cease activity and contact you in regards to the disposition of any such artifacts, remains or objects.

I respectfully request your review, comments and concurrence on the proposed action. Please provide comments no later than 30 days from receipt of this letter. A non-response will be considered as concurrence. Please provide any response to me at 781-225-2969 or at charles.strickland.4@us.af.mil.

Very Respectfully

A handwritten signature in black ink, appearing to read "C. Strickland III".

CHARLES N. STRICKLAND III, P.E.
Chief, Environmental Section

- 2 Attachments:
1. Location Map
2. 15 % Design Drawing

Cc:
Ms. Bettina Washington
Tribal Historic Preservation Officer
Wampanoag Tribe of Gay Head (Aquinnah)
20 Black Brook Road
Aquinnah, MA 02535-9701

Location Map



6.5. Massachusetts Historical Commission Consultation



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 66TH AIR BASE GROUP
HANSCOM AIR FORCE BASE MASSACHUSETTS

RECEIVED

JUL 14 2014

MASS. HIST. COMM

JUL 8 2014 ②-7184

Mr. Charles N. Strickland III, P.E.
66 ABG/CEIE
120 Grenier Street
Hanscom AFB MA 01731-1910

Ms. Brona Simon
Commonwealth of Massachusetts
Executive Director
Massachusetts Historical Commission
220 Morrissey Boulevard
Boston MA 02125

CONCURRENCE: 8/5/14

Brona Simon
BRONA SIMON
STATE HISTORIC
PRESERVATION OFFICER
MASSACHUSETTS
HISTORICAL COMMISSION

Dear Ms. Simon

Hanscom Air Force Base (AFB) is proposing to demolish two (2) cabins, B 35 and B 37 (see Location Map), and construct eight (8) Recreational Vehicle (RV) sites (See 15% Design Drawing) at its Fourth Cliff Recreational Annex in Scituate, MA. The cabins are in major despair and cannot be used. The new RV sites would better meet the needs of patrons that use the Fourth Cliff Recreational Annex. The proposed sites would include water, sewer and electrical service, and would be in compliance with all federal, state, local codes.

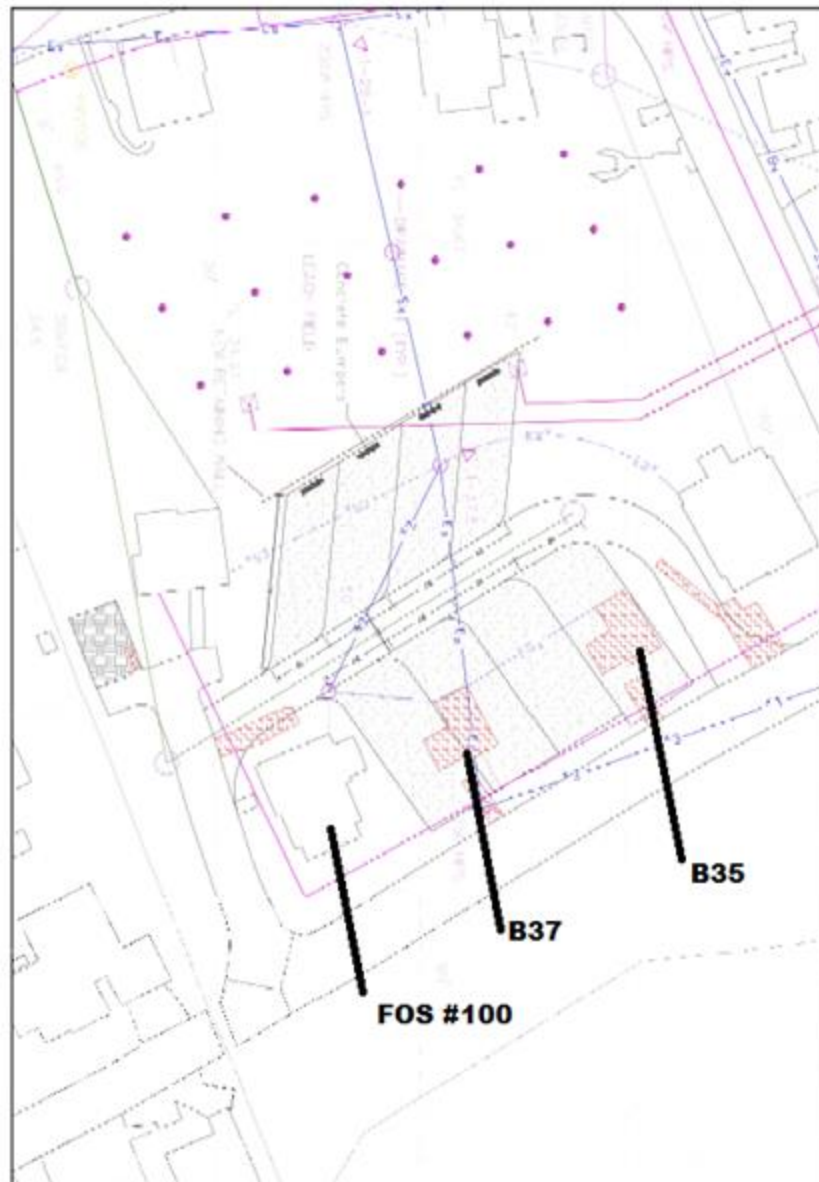
Massachusetts Historical Commission (MHC) has previously determined that there are structures at the Fourth Cliff Recreational Annex in Scituate, MA that are eligible for listing on the National Register of Historic Places (NRHP). These structures include Battery 208, Fire Control Tower #101, and Fire Observation Station #100. The Fire Observation Station #100 (FOS #100) is in close proximity to the proposed construction, but will remain in-place and will not be altered. If this action were to occur, no significant impact associated with land use, socioeconomic, cultural resources, occupational safety & health, water supply, wastewater, solid waste, transportation, noise, air quality, geology/soils, surface water/groundwater, floodplains, biological resource, hazardous waste, or the environmental restoration program would be anticipated. An Environmental Assessment (EA) is being prepared to validate no significant impacts and is expected to be published later in 2014.

Attached are pictures of the structures and proposed site that were taken on 1 July 2014. I respectfully request your review, comments and concurrence on the proposed action. Please provide comments no later than 30 days from receipt of this letter. A non-response will be considered as concurrence. The Scituate Historical Commission was also sent a letter requesting their review. If you have any questions, please contact me at 781-225-2969 or at charles.strickland.4@us.af.mil.

Very Respectfully

CHARLES N. STRICKLAND III, P.E.
Installation Management Flight Chief

15% Design Drawing




 Photos taken by Jim Maravelias on 1 July 2014



FOS #100 and B 37 taken from East



Proposed Site with West of FOS #100, B 37 and B 35 taken from South

 Photos taken by Jim Maravelias on 1 July 2014



Proposed Site with West of B 35, B 37, and FOS #100 taken from North



B 37 and B 35 taken from Southeast




Photos taken by Jim Maravelias on 1 July 2014



Proposed Site with West of B 35, B 37, and FOS #100 taken from North



B 37 and B 35 taken from Southeast


 Photos taken by Jim Maravelias on 1 July 2014



B 37 taken from East



B 37 taken from North


 Photos taken by Jim Maravelias on 1 July 2014



B 37 taken from West



B 37 taken from North


 Photos taken by Jim Maravelias on 1 July 2014



B 35 taken from East



B 35 taken from South

 Photos taken by Jim Maravelias on 1 July 2014



B 35 taken from West



B 35 taken from North

6.6. Situate Historical Commission Consultation



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 66TH AIR BASE GROUP
HANSCOM AIR FORCE BASE MASSACHUSETTS

Mr. Charles N. Strickland III, P.E.
66 ABG/CEIE
120 Grenier Street
Hanscom AFB MA 01731-1910

Mr. Doug Smith
Scituate Historical Commission
Town Hall
600 Chief Justice Cushing Way
Scituate, MA 02066

Dear Mr. Smith,

Hanscom Air Force Base (AFB) is proposing to demolish two (2) cabins, B 35 and B 37 (see Location Map), and construct eight (8) Recreational Vehicle (RV) sites (See 15% Design Drawing) at its Fourth Cliff Recreational Annex in Scituate, MA. The cabins are in major despair and cannot be used. The new RV sites would better meet the needs of patrons that use the Fourth Cliff Recreational Annex. The proposed sites would include water, sewer and electrical service, and would be in compliance with all federal, state, local codes.

Massachusetts Historical Commission (MHC) has previously determined that there are structures at the Fourth Cliff Recreational Annex in Scituate, MA that are eligible for listing on the National Register of Historic Places (NRHP). These structures include Battery 208, Fire Control Tower #101, and Fire Observation Station #100. The Fire Observation Station #100 (FOS #100) is in close proximity to the proposed construction, but will remain in-place and will not be altered. If this action were to occur, no significant impact associated with land use, socioeconomic, cultural resources, occupational safety & health, water supply, wastewater, solid waste, transportation, noise, air quality, geology/soils, surface water/groundwater, floodplains, biological resource, hazardous waste, or the environmental restoration program would be anticipated. An Environmental Assessment (EA) is being prepared to validate no significant impacts and is expected to be published later in 2014.

Attached are pictures of the structures and proposed site that were taken on 1 July 2014. I respectfully request your review, comments and concurrence on the proposed action. Please provide comments no later than 30 days from receipt of this letter. A non-response will be considered as concurrence. MHC was also sent a letter requesting their review. If you have any questions, please contact me at 781-225-2969 or at charles.strickland.4@us.af.mil.

Very Respectfully

CHARLES N. STRICKLAND III, P.E.
Installation Management Flight Chief

3 Attachments:

1. Location Map
2. 15 % Design Drawing
3. Photos taken by Jim Maravelias, Portage, Inc. on 1 July 2014

Same attachments as MHC letter in Section 6.6

6.7. Natural Heritage & Endangered Species Consultation

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 66TH AIR BASE GROUP
HANSCOM AIR FORCE BASE MASSACHUSETTS

Mr. Charles N. Strickland III, PE
66 ABG/CEIE
120 Grenier Street
Hanscom AFB MA 01731-1910

01 JUL 2014

Misty-Anne R. Marold
Endangered Species Review Biologist
Natural Heritage & Endangered Species Program
Division of Fisheries & Wildlife
1 Rabbit Hill Road
Westborough MA 01581

Dear Ms. Marold

I would like to inform the Division of Fisheries & Wildlife that Hanscom Air Force Base (AFB) is proposing to demolish two (2) cabins and construct eight (8) Recreational Vehicle (RV) sites at its Fourth Cliff Recreational Annex in Scituate, MA. The cabins are in major despair and cannot be used. The new RV sites would better meet the needs of patrons that use the Fourth Cliff Recreational Annex. The proposed sites would include water, sewer and electrical service, and the sites would be constructed in compliance with all federal, state, local codes.

The proposed area was previously disturbed during the construction of the cabins and roadways that provide access to the cabins. There is a coastal waterbird nesting habitat east of the site and Piping Plovers and Least Terns nest at Fourth Cliff when storm activity overwashes enough of the beach to create a vegetation free berm. The habitat is not expected to be impacted because the amount of patrons is not expected to increase.

If this action were to occur, no significant impact associated with land use, socioeconomics, cultural resources, occupational safety & health, water supply, wastewater, solid waste, transportation, noise, air quality, geology/soils, surface water/groundwater, floodplains, biological resource, hazardous waste, or the environmental restoration program would be anticipated. An Environmental Assessment (EA) is being prepared to validate no significant impacts and is expected to be published later in 2014. The EA that is being prepared will discuss site monitoring, restricted beach access, and community educational tools to protect the habitat.

I respectfully request your review, comments and concurrence on the proposed action. Please provide comments no later than 30 days from receipt of this letter. A non-response will be considered as concurrence. Please provide any response to me at 781-225-2969 or at charles.strickland.4@us.af.mil.

Very Respectfully

A handwritten signature in dark ink, appearing to read "C. Strickland", is written over a horizontal line.

CHARLES N. STRICKLAND III, P.E.
Chief, Environmental Section

3 Attachments:

1. Location Map
2. 15 % Design Drawing
3. Coastal Waterbird Nesting Habitat Map

Location Map



15% Design Drawing



Fourth Cliff Recreational Annex – Coastal Waterbird Nesting Habitat



6.8. U.S. Fish and Wildlife Consultation

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 66TH AIR BASE GROUP
HANSCOM AIR FORCE BASE MASSACHUSETTS

Mr. Charles N. Strickland III, PE
66 ABG/CEIE
120 Grenier Street
Hanscom AFB MA 01731-1910

01 JUL 2014

Ms. Susi von Oettingen
Endangered Species Biologist
US Fish and Wildlife Service
70 Commercial Street, Suite 300
Concord, NH 03301

Dear Ms. von Oettingen

I would like to inform the US Fish and Wildlife Service that Hanscom Air Force Base (AFB) is proposing to demolish two (2) cabins and construct eight (8) Recreational Vehicle (RV) sites at its Fourth Cliff Recreational Annex in Scituate, MA. The cabins are in major despair and cannot be used. The new RV sites would better meet the needs of patrons that use the Fourth Cliff Recreational Annex. The proposed sites would include water, sewer and electrical service, and the sites would be constructed in compliance with all federal, state, local codes.

The proposed area was previously disturbed during the construction of the cabins and roadways that provide access to the cabins. There is a coastal waterbird nesting habitat east of the site and Piping Plovers nest at Fourth Cliff when storm activity overwashes enough of the beach to create a vegetation free berm. The habitat is not expected to be impacted because the amount of patrons is not expected to increase.

If this action were to occur, no significant impact associated with land use, socioeconomics, cultural resources, occupational safety & health, water supply, wastewater, solid waste, transportation, noise, air quality, geology/soils, surface water/groundwater, floodplains, biological resource, hazardous waste, or the environmental restoration program would be anticipated. An Environmental Assessment (EA) is being prepared to validate no significant impacts and is expected to be published later in 2014. The EA that is being prepared will discuss site monitoring, restricted beach access, and community educational tools to protect the habitat.

I respectfully request your review, comments and concurrence on the proposed action. Please provide comments no later than 30 days from receipt of this letter. A non-response will be considered as concurrence. Please provide any response to me at 781-225-2969 or at charles.strickland.4@us.af.mil.

Very Respectfully

A handwritten signature in black ink, appearing to read "C. Strickland III", is written over a horizontal line.

CHARLES N. STRICKLAND III, P.E.
Chief, Environmental Section

3 Attachments:

1. Location Map
2. 15 % Design Drawing
3. Coastal Waterbird Nesting Habitat Map

Attachments are the same as in Section 6.7



United States Department of the Interior

FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5087
<http://www.fws.gov/newengland>



REF: RV Site Construction, Fourth Cliff Recreational Annex
Scituate, MA

August 1, 2014

Mr. Charles N. Strickland III
Department of the Air Force
66 ABG/CEIE
120 Grenier Street
Hanscom AFB Massachusetts 01731-1910

Dear Mr. Strickland:

This responds to your letter, dated July 1, 2014, requesting that we review the proposed cabin demolition and construction of eight Recreational Vehicle (RV) sites at Fourth Cliff Recreational Annex in Scituate, Massachusetts, and concur with your not likely to adversely affect determination for the federally threatened piping plover (*Charadrius melodus*). Our comments are provided in accordance with the Endangered Species Act (87 Stat. 884, as amended: 16 U.S.C 1531, *et seq.*).

As stated in your letter, at least one pair of piping plovers nests on the beach east of the proposed demolition site at Fourth Cliff. The construction will not occur in or near nesting habitat; therefore, we do not anticipate direct impacts to piping plovers from the proposed activity. Currently, the piping plovers at Fourth Cliff are being managed according to U.S. Fish and Wildlife Service guidelines for managing recreational use on piping plover beaches. We would not anticipate indirect effects from additional recreational use from visitors using the eight new RV locations, as long as the plovers continue to be managed protectively. Therefore, we concur with your not likely to adversely affect determination.

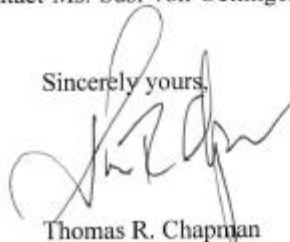
Further consultation with us under section 7 of the Endangered Species Act is not required at this time. Should project plans change, or additional information on listed species becomes available, this determination may be reconsidered.

Mr. Charles N. Strickland III
August 1, 2014

2

Thank you for your cooperation, and please contact Ms. Susi von Oettingen at (603) 223-2541, extension 22, if you need further assistance.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'T. Chapman', written over the words 'Sincerely yours,'.

Thomas R. Chapman
Supervisor
New England Field Office

6.9. North and South Rivers Watershed Association Consultation

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 66TH AIR BASE GROUP
HANSCOM AIR FORCE BASE MASSACHUSETTS

Mr. Charles N. Strickland III, PE
66 ABG/CEI
120 Grenier Street
Hanscom AFB MA 01731-1910

9 AUG 2014

Ms. Paula Christie
Assistant Director
North and South Rivers Watershed Association
PO Box 43
Norwell MA 02061

RE: Renovation of Fourth Cliff Recreational Annex, 2014-010

Dear Ms. Christie

I would like to inform the North and South Rivers Watershed Association that Hanscom Air Force Base (AFB) is proposing to demolish two (2) cabins and construct eight (8) Recreational Vehicle (RV) sites at its Fourth Cliff Recreational Annex in Scituate, MA. The cabins are in major despair and the new RV sites would better meet the needs of patrons that use the Fourth Cliff Recreational Annex. The proposed sites would include water, sewer and electrical service, and the sites would be constructed in compliance with all federal, state, local codes.

If this action were to occur, no significant impact associated with coastal zone, land use, socioeconomic, cultural resources, occupational safety & health, water supply, wastewater, solid waste, transportation, noise, air quality, geology/soils, surface water/groundwater, floodplains, biological resources, wetlands, hazardous waste, or the environmental restoration program would be anticipated. An Environmental Assessment (EA) is being prepared to validate no significant impacts and is expected to be published later in 2014.

The proposed area was previously disturbed during the construction of the cabins and roadways that provide access to the cabins. I respectfully request your review, comments and concurrence on the proposed action. Please provide comments no later than 30 days from receipt of this letter. A non-response will be considered as concurrence. Please provide any response to me at 781-225-2969 or at charles.strickland.4@us.af.mil.

Very Respectfully

A handwritten signature in black ink, appearing to read "C. Strickland III".

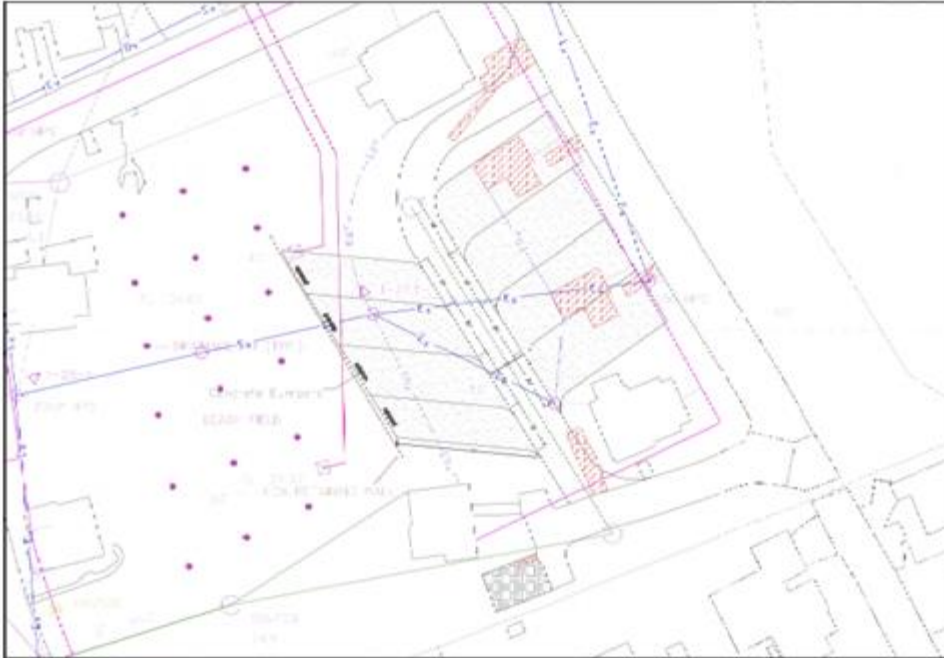
CHARLES N. STRICKLAND III, P.E.
Installation Management Flight Chief

- 3 Attachments:
1. Location Map
 2. 15 % Design Drawing
 3. Wetland Buffer Map

Location Map



15% Design Drawing





6.10. Massachusetts Office of Coastal Zone Management Consultation

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 66TH AIR BASE GROUP
HANSCOM AIR FORCE BASE MASSACHUSETTS

Mr. Charles N. Strickland III, PE
66 ABG/CEI
120 Grenier Street
Hanscom AFB MA 01731-1910

19 AUG 2014

Mr. Jason Burtner
CZM South Shore Regional Coordinator
c/o Stellwagen Bank National Marine Sanctuary
175 Edward Foster Road
Scituate, MA 02066

RE: Renovation of Fourth Cliff Recreational Annex, 2014-002

Dear Mr. Burtner

I would like to inform the Massachusetts Office of Coastal Zone Management (CZM) South Shore Regional Office that Hanscom Air Force Base (AFB) is proposing to demolish two (2) cabins and construct eight (8) Recreational Vehicle (RV) sites at its Fourth Cliff Recreational Annex in Scituate, MA. The cabins are in major despair and the new RV sites would better meet the needs of patrons that use the Fourth Cliff Recreational Annex. The proposed sites would include water, sewer and electrical service, and the sites would be constructed in compliance with all federal, state, local codes.

If this action were to occur, no significant impact associated with coastal zone, land use, socioeconomics, cultural resources, occupational safety & health, water supply, wastewater, solid waste, transportation, noise, air quality, geology/soils, surface water/groundwater, floodplains, biological resources, wetlands, hazardous waste, or the environmental restoration program would be anticipated. An Environmental Assessment (EA) is being prepared to validate no significant impacts and is expected to be published later in 2014.

The proposed area was previously disturbed during the construction of the cabins and roadways that provide access to the cabins. I respectfully request your review, comments and concurrence on the proposed action. Please provide comments no later than 30 days from receipt of this letter. A non-response will be considered as concurrence. Please provide any response to me at 781-225-2969 or at charles.strickland.4@us.af.mil.

Very Respectfully

A handwritten signature in blue ink, appearing to read "C. Strickland III", is written over a horizontal line.

CHARLES N. STRICKLAND III, P.E.
Installation Management Flight Chief

- 3 Attachments:
1. Location Map
 2. 15 % Design Drawing
 3. Wetland Buffer Map

Attachments are the same as in Section 6.9

6.11. Public Notice Printed in Local Newspapers, 9 October 2014

Public comments invited on the Hanscom Air Force Base Fourth Cliff Recreational Annex, Scituate, Mass. --The United States Air Force announces the availability of a Draft Environmental Assessment, or EA, and Finding of No Significant Impact, or FONSI, for the proposed Renovation of Hanscom AFB's Fourth Cliff Recreational Annex.

Hanscom AFB is proposing to demolish two cabins and construct eight Recreational Vehicle sites at its Fourth Cliff Recreational Annex in Scituate, Mass. The cabins are in major disrepair and the new RV sites would better meet the needs of patrons that use the Fourth Cliff Recreational Annex. The proposed sites would include water, sewer and electrical service, and would be in compliance with all federal, state, local codes.

The Draft EA and FONSI address the site-specific impacts of renovating the Fourth Cliff Recreational Annex operated by Hanscom AFB, and evaluate the consequences of the proposed action and alternatives on the natural and man-made environments. Any impacts related to the proposed action are anticipated to be minor and the best management practices providing in the draft EA/FONSI would further reduce any impact.

Copies of the Draft EA/FONSI are available for review at the main public library in Scituate and at the Hanscom AFB Environmental Office, Building 1825.

For further information concerning the Draft EA/FONSI, please contact the Environmental Office at Hanscom AFB at 781-225-2969.

Written comments on the Draft EA/FONSI will be received until Oct. 24, 2014 and may be mailed to Chuck Strickland, 66 ABG/CEI, 72 Dow Street, Hanscom AFB, MA 01731 or emailed to Charles.Strickland.4@us.af.mil.

**The Department of the Air Force Invites Public Comments
On Its Renovate Hanscom AFB Fourth Cliff Recreational Annex
Environmental Assessment at Hanscom AFB**

Section 7. General Conformity – Record of Non-Applicability

GENERAL CONFORMITY - RECORD OF NON-APPLICABILITY

Project / Action Name:	Fourth Cliff Recreational Annex, Cabin Demolition and RV Site Construction
Begin Date: 10/1/2014	End Date: 3/31/2015

General Conformity under the Clean Air Act, Section 176(c), has been evaluated for the project described above according to the requirements of 40 CFR 93, Subpart B. The requirements of this rule are not applicable to this proposed project/action because the total direct and indirect emissions in tons per year (tpy) for the applicable pollutants of concern (i.e., NO_x and VOC) for the year showing the highest emissions have been estimated to be:

2014 Emission Summary	VOC (tpy)	NO _x (tpy)
Construction Phase	0.131	0.294
Operational Phase	0.050	0.691
TOTAL	0.168	0.892

These emission rates are below the conformity threshold values established in 40 CFR 93.153(b) of:

Conformity Threshold Rate:	
VOC	50 tpy
NO _x	100 tpy

In addition, the project/action is not considered regionally significant under 40 CFR 93.153(i), as the estimated emissions, using reasonable and conservative assumptions, are significantly less than 10% of the regional emissions. Therefore, a conformity determination is not required.

Supporting documentation and emissions estimates for the project/action (i.e., construction/renovation and operational phases are attached and included in the NEPA documentation).

Signed: 

Date: 20 AUG 14

SUPPORTING DOCUMENTATION

Description of Project / Action:

The proposed action is to demolish two rental cabins and reconfigure the area for use as Recreational Vehicle (RV) campsites at the Fourth Cliff Recreational Annex (Fourth Cliff) in Scituate, Massachusetts. Two existing rental cabins (Building 35 and Building 37) are in major disrepair and it has been determined that they should be demolished and RV sites constructed in the former building locations. The new RV sites are to include water, sewer and electrical service. The site will also be prepared (utilities) for future expansion of the site. The first sites to be completed will be the west sites which will include the construction of a retaining wall in order to allow road level RV sites to be constructed. All work will be performed in accordance with all applicable Federal, Local, State and USAF Codes and Standards

The proposed action will include the following elements:

1. Demolish recreational site lodging facilities Building 35 and Building 37.
2. Remove all the supporting utilities associated with buildings to be demolished and cap them 5 feet from the associated main (water and sanitary sewer).
3. Remove all overhead electrical lines associated with buildings to be demolished.
4. Provide fill in former building locations to match elevation at the crown of the adjacent road.
5. Construct a one-way stone access drive with turning radius for a Type Bus-40.
6. Construct eight (8) new stone RV sites with a 10'x20' concrete pad. The four (4) sites on the west will be the first sites constructed unless the demolition of Building 35 and Building 37 are complete.
7. Ensure positive drainage away from the new RV sites, new access drive and existing cottages.
8. Construct a new gravity sanitary sewer main from the new RV sites to an established point of connection within the property limits.
9. Install water, sewer and electrical connection to each of the new RV sites.
10. Provide stub-outs of utilities for future expansion of the RV sites.
11. Provide and install landscaping to provide screening between each site.

Methodology:

The General Conformity Applicability Analysis was conducted using the methodology outlined in the appropriate Department of Defense general conformity guidance documents (USAF, 2003). A Record of Non-Applicability (RONA) was prepared since the NOx and VOC emissions are less than the General Conformity *de minimus* thresholds and are not considered to be regionally significant.

Calculations were performed using an excel spreadsheet that used EPA approved AP-42 emission factors and Air Force IERA mobile source emission guidance. The spreadsheet quantified emissions from site demolition, excavation, grading, utility work and paving heavy equipment used for all related activities, and POVs used to transport workers to/from the site for the estimated duration of the project. Since this project involves installation of new RV camping sites which by nature have varied and transient emission sources, worst case scenario was used to quantify emissions from propane fired space heaters in new RV sites. Emissions from previous stationary sources were quantified by using estimated propane and fuel oil consumption based on worst case scenario conditions.

Input Parameters and Assumptions:

Project-specific parameters were used or assumed for the proposed project. Although the exact means and methods of construction would be the responsibility of the contractor, it was necessary to make certain assumptions, such as the quantity and type of vehicles, to estimate emissions. When possible, conservative assumptions were made.

Construction Activities:

This project, including demolition, excavation, utility work and installation of concrete slabs was assumed to be 6 months (120) working days in duration beginning on 10/01/2014 and concluding by 03/30/2015. Other parameters and assumptions were made for the following related activities:

Heavy Construction Equipment

This includes emissions from heavy construction equipment involved in utility demolition and installation, grading, paving, excavation, soil and material movement, and debris hauling. Although estimation is required, estimates of type and number of equipment is conservative based on footprint of the overall project and relatively routine construction activities, not requiring phasing or temporary facilities. Large excavation equipment was conservatively assumed to run for 2/3 of the total working hours for the project. Paving and compaction equipment were assumed to run for 40 hours in each of the two calendar years that demolition and construction will take place.

Construction Employee Travel

It was estimated that an average of 5 contractors would be required to be on-site every day, five days a week for the full project duration of 6 months. No overtime or off shift work was assumed so 21 working days per month for six months (63 working days during each calendar year) was assumed. Although the employees may not be the same throughout the project (i.e. concrete contractors will not be the same employees used during utility work or construction of the screen porch) little to no overlap was assumed. The assumption of 5 employees on site at any given time is a reasonably expected level of activity. To obtain worst case emissions, no carpooling or public transportation was assumed (i.e., every contractor drove individual POV). It was assumed that three of the contractors drove gasoline engine passenger vehicles, while the other two drove gasoline engine trucks (GVW >6,000 lbs).

Operational Activities:**Stationary Emission Sources**

Stationary emission sources were confined to two #2 fuel oil furnaces currently installed in the caretaker's residence and recreation hall, 18 existing cottages and one condominium building serviced by a total of 19 propane (LPG) fired forced hot air furnaces and various space heaters associated with RVs utilizing existing and new RV sites. Fuel consumption for building furnaces was based on the known firing rates of the units and each furnace was conservatively assumed to run for half of each hour during the heating season. Although some RVs may utilize electrical service for heat, the assumption of this calculation is that all RVs in both existing and new sites will utilize LPG furnaces for heat during the heating season. To obtain worst case emissions, it was assumed that all propane furnaces burn 4 gallons per hour and that they would run continuously throughout the heating season (November – April).

Results:

Estimated Calculations Based on the estimated VOC and NOx emissions, using conservative and reasonable assumptions, the total project emissions are well below the regulatory thresholds of 50 tpy and 100 tpy, respectively.

Year	Phase	Emissions (tons per year)				
		No _x	CO	VOC	SO ₂	PM
2013	Construction	0	0	0	0	0
	Operational	0.691	0.381	0.050	0.398	0.040
	Total 2013 Emissions	0.691	0.381	0.050	0.398	0.040
2014	Construction	0.294	1.904	0.131	0.518	0.213
	Operational	0.691	0.381	0.050	0.398	0.040
	Total 2014 Emissions	0.986	2.285	0.181	0.917	0.253
2015	Construction	0.294	1.524	0.080	0.120	0.173
	Operational	0.654	0.359	0.048	0.398	0.038
	Total 2015 Emissions	0.948	1.882	0.128	0.518	0.211
2016	Construction	0	0	0	0	0
	Operational	0.654	0.359	0.048	0.398	0.038
	Total 2016 Emissions	0.654	0.359	0.048	0.398	0.038

Emissions will be highest during calendar year 2014; therefore, those emissions were reported in the Record of Non-Applicability and compared to the general conformity annual thresholds.

Regional Significance

An action is regionally significant if the total direct and indirect emissions of an individual pollutant amount to 10 percent or more of the non-attainment area emissions of that pollutant. Table E1-1 of the Commonwealth of Massachusetts State Implementation Plan (SIP) for the ozone non-attainment area (MADEP, 2008) shows the total area-wide emissions to be as follows:

VOC 540.3 tons/day

NOx 475.2 tons/day

The total emissions from the project were estimated to be significantly less than 10 percent of the area-wide emissions as described in the applicable SIP.

References:

Massachusetts Department of Environmental Protection (MADEP). Final Massachusetts State Implementation Plan to Demonstrate Attainment of the National Ambient Air Quality Standard for Ozone. Jan 31 2008.

U.S. Air Force (USAF). IERA Air Emissions Inventory Guidance Document for Mobile Sources at Air Force Installation, May 1999, Revised December 2003, Section 4.

USAF. Memorandum for ALMAJCOM/CEVs, HQ USAFA/CEV, 11th WG/CEV. Subject: Air Conformity Guide. 26 August. 2003.

USEPA. AP 42, Fifth Edition. *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources*. Section 1.3, January 1995.section 1.5 updated July 2008
<http://www.epa.gov/ttn/chief/ap42/>

Section 8. List of Preparers

The Environmental Office (66ABG/CEIE) prepared this document to fulfill the requirements of the National Environmental Policy Act (NEPA) for the proposed action to Renovate the Hanscom Fourth Cliff Recreational Annex. The following persons authored and provided direct oversight for the preparation of this environmental assessment:

MANAGEMENT

Strickland III, Charles, P.E., 66 ABG/CEIE. B.S. in Civil Engineering; As the Installation Management Fight Chief, assisted in the completion of the wetlands and surface water assessments, and reviewed the entire environmental assessment for accuracy and completeness.

TASK LEADER

Maravelias, James. Portage, Inc. A.L.M in Sustainability and Environmental Management; As a Senior Environmental Scientist with broad experience in the management and regulation of hazardous waste and the U.S. Air Force Environmental Impact Analysis Process (EIAP), managed the preparation and was the primary author of this environmental assessment.

QUALITY ASSURANCE LEADER

Sheehan, Scott. 66 ABG/CEIE. B.S. in Civil Engineering; As installation program manager for natural and cultural resources and water quality, provided input to and technical review of this environmental assessment.

CONTRIBUTING AUTHORS

Campbell, Ian. Campbell Consulting. B.S. in Environmental Studies; As a Senior Environmental Scientist with broad experience in environmental compliance and air quality permitting, provided input to selected sections of this environmental assessment.

CONTRIBUTING AUTHORS

Mannix, Emily. 66 ABG CEIE, As an Environmental/Civil Engineering Intern, provided technical review of this environment assessment.

Mazyck, O'Neill. 66 ABG/CEIE; As the Hazardous Materials Manager, assisted in historical research and site assessment for this environmental assessment.

Ralls, Raymond D., P.E., 66 ABG/CENM, Masters in Civil Engineering. As a Civil Engineer, assisted with the review of the project scope and alternatives.

Spelfogel, Robert. 66 ABG/CEIE. M.S. in Environmental Engineering; As the Environmental Compliance Program Manager, assisted in review of various environmental protocols for this environmental assessment.

Section 9. References

Commonwealth of Massachusetts: Executive Office of Environmental Affairs (EOEA). 2001. Accessed at <http://appraisercentral.com/st/Bedford-Zoning.pdf>.

Council on Environmental Quality (CEQ), 1978. Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act. 40 CFR Parts 1500-1508. November 28, 1978 (and as updated through July 1, 1998).

Federal Emergency Management Agency (FEMA). 2012. National Flood Insurance Program: Flood Insurance Rate Map: Plymouth County, Massachusetts: Panel 137 of 650. Map Number 25025C0137JH. Retrieved from <
[Federal Emergency Management Agency \(FEMA\). 2014. Map Service Center accessed at <http://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1>](http://map1.msc.fema.gov/idms/IntraView.cgi?ROT=0&O_X=6819&O_Y=8256&O_ZM=0.350000&O_SX=1125&O_SY=802&O_DPI=400&O_TH=68862476&O_EN=52764639&O_PG=1&O_MP=1&CT=0&DI=0&WD=14400&HT=10350&JX=1263&JY=863&MPT=0&MPS=0&A CT=4&KEY=68862129&ITEM=1&PICK_VIEW_CENTER.x=548.5&PICK_VIEW_CENTER.y=435>.</p></div><div data-bbox=)

Hanscom AFB (HAFB). 1998a. General Plan – Hanscom Air Force Base. Prepared by Michael Baker Jr, Inc. October 1998.

Hanscom AFB (HAFB). 1998b. Phase I Archeological Survey, Hanscom Air Force Base, Massachusetts. Prepared by Parsons Engineering Science, Inc. August 1998.

Hanscom AFB (HAFB). 2003a. General Plan Update – Hanscom Air Force Base. Prepared by Parsons Brinckerhoff Quade & Douglas, Inc. November 2003.

Hanscom AFB (HAFB). 2003b. Draft Storm Water Pollutant Total Maximum Daily Load for Headwaters of the Shawsheen River. Prepared by Merrimack River Watershed Council. June 2003.

Hanscom AFB (HAFB). 2010a. Integrated Natural Resources Management Plan for Hanscom Air Force Base – Draft. Prepared by Hanscom AFB Environmental Management Office. 18 May 2010.

Hanscom AFB (HAFB). 2010b. Integrated Cultural Resources Management Plan – Hanscom Air Force Base. Prepared by John Milner Associates, Inc. December 2010.

Hanscom AFB (HAFB). 2010g. 2009 Solid Waste Facility Report – Hanscom AFB. 12 February 2010.

Hanscom AFB (HAFB). 2011a. Integrated Natural Resources Management Plan for Hanscom Air Force Base – Updated 19 May 2011. Prepared by Hanscom AFB Environmental Management Office. 19 May 2011.

Hanscom AFB (HAFB). 2013a. Fact Sheet – Hanscom AFB; RE: economic impact on the surrounding community. Accessed at <http://www.hanscom.af.mil/library/factsheets/factsheet.asp?id=7493>

Hanscom AFB (HAFB). 2014a. Personal communication between Nicole Craver, 66ABG/CEOSS and J. Maravelias, Portage, Inc., regarding the Solid Waste/Recycling support contract, August 2014.

Hanscom AFB (HAFB). 2014b. Personal communication between Joseph Philbrick 66AGB and J. Maravelias, Portage, Inc., regarding the drinking water and sanitary wastewater systems, July, 2014.

Hanscom AFB (HAFB). 2014c. Personal communication between Ian Campbell, Campbell Consulting., and J. Maravelias, Portage, Inc., regarding air quality, August, 2014.

Massachusetts Department of Environmental Protection (MassDEP). 2007. Commonwealth of Massachusetts – 2006 Air Quality Report. July 2007.

Merrimack River Watershed Council (MRWC). 2001. A Report on Hanscom Stormwater System Computer Model – Model Development and Calibration. June 2001.

National Resources Conservation Service (NRCS). 2014. Web soil Survey Retrieved on 7 July 2014 from <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.

OCC (Ocean and Coastal Consultants, Inc.). 2001. Coastal Bank Erosion Study, United States Air Force Fourth Cliff Recreation Facility, Scituate, MA. March.

RPF Environmental (RPF). 2013. Fourth Cliff Recreational Annex, Units 35 and 37, Humarck, Massachusetts: Building Survey Findings. June 2013.